



# REPUBLIC OF KENYA

## MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING AND URBAN DEVELOPMENT

### DIRECTORATE OF PUBLIC WORKS

**PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA  
VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.**

#### **TENDER DOCUMENT**

**TENDER NO: BSA/CG/EVT/90/2020/2021**

**NEGOTIATION NO: 824888**

**PREPARED BY**

**COUNTY QUANTITY SURVEYOR  
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P.O BOX 470-50400  
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**ISSUED BY:**

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**SEPTEMBER-2020**



**COUNTY GOVERNMENT OF BUSIA  
DEPARTMENT OF  
INFRASTRUCTURE AND ENERGY  
P.O. BOX PRIVATE BAG – 50400  
BUSIA, KENYA**



**SECTION I**

**INVITATION TO TENDER**

The county Government of Busia invites interested eligible contractors to apply for the tender listed above FOR FY2020/2021

Tender documents containing detailed information on the tenders can be freely downloaded from the IFMIS Supplier portal (<https://supplier.treasury.go.ke>, <https.tenders.go.ke>).

Complete tender documents must be submitted through the *IFMIS* supplier portal: [supplier.treasury.go.ke](https://supplier.treasury.go.ke) so as to be received on or before **Monday, 2<sup>nd</sup> November 2020** at 9.00 a.m. All tenders **MUST** be submitted through the IFMIS platform SUPPLY CHAIN MANAGEMENT SERVICES

NOTE: Bidders who may experience challenges in accessing and uploading their tenders in the IFMIS tender portal should contact the IFMIS Helpdesk (email <http://ifmis.go.ke>. Tel 0800721477/0204801801) at the treasury or contact our Supply Chain Function office located at the County Headquarters first floor, room 47.

THE ACCOUNTING OFFICER  
COUNTY GOVERNMENT OF BUSIA

**SECTION NO.1****PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.****CONTENTS PAGE**

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### PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC BUTULA SUB-COUNTY-BUSIA COUNTY.

#### TENDER DOCUMENT

Supplied as part of contract for **PROPOSED CONSTRUCTION OF COMPUTER  
LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA  
COUNTY.**

County Works Officer  
Ministry of Public Works  
P O Box 470-50400  
BUSIA (K)

The Contract for the above works entered into this ..... day of.....2020 by the undersigned refers to these bills of quantities and the ministry of **ministry of transport, infrastructure, housing and urban development** General Specifications dated March 1976 (together with any amendments issued thereto) shall be read and construed as part of the said Contract.

\_\_\_\_\_  
CONTRACTOR

Date:\_\_\_\_\_

\_\_\_\_\_  
The. CLIENT

Date: \_\_\_\_\_

SIGNATURE PAGE AND NOTES

**SPECIAL NOTES**

The Contractor is required to check the numbers of the pages of these Bills of Quantities and should he/her find any missing or in duplicate or figures indistinct, he must inform the County Works Officer; Ministry of Public Works, Busia County at once and have the same rectified.

Should the contractor be in doubt about the precise meaning of any item or figure for any reason whatsoever, he must inform the County Works Officer, Ministry of Public Works, Busia in order that the correct meaning may be decided before the date for submission of the tenders.

No liability will be admitted nor claim allowed in respect of errors in the contractor's tender due to mistakes in the tender documents which should have been rectified in the manner described above.

## **SECTION NO.2**

### **STANDARD TENDER DOCUMENTS**

#### **TENDERING INSTRUCTIONS**

##### **1. 1. General**

The Employer as defined in the Appendix to Conditions of Contract invites tenders for Works contract as described in the tender documents. The successful tenderer will be expected to complete the works by the Intended Completion Date specified in the tender documents.

All tenderers shall provide the Qualification Information, a statement that the tenderer (including all members of a joint venture and subcontractors) is not associated, or has not been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the Works, and any of its affiliates, shall not be eligible to tender.

All tenderers shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

In the event that pre-qualification of potential tenderers has been undertaken, only tenders from pre-qualified tenderers will be considered for award of Contract. These qualified tenderers should submit with their tenders any information updating their original pre-qualification applications or, alternatively, confirm in their tenders that the originally submitted pre-qualification information remains essentially correct as of the date of tender submission.

Where no pre-qualification of potential tenderers has been done, all tenderers shall include the following information and documents with their tenders, unless otherwise stated:

- a) Copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the tender to commit the tenderer:
- b) Total monetary value of construction work performed for each of the last five years:
- c) Experience in the works of a similar nature and size of each of the last five years, and details of work under way or contractually committed: and names and addresses of clients who may be contacted for further information on these contracts;
- d) Major items of construction equipment proposed to carry out the contract and an undertaking that they will be available for the Contract.

#### **INSTRUCTIONS**

- e) Qualifications and experience of key site management and technical personnel proposed for the Contract and an undertaking that they shall be available for the contract.
- f) Reports on the financial standing of the tenderer, such as profit and loss statements and auditors reports for the past five years;
- g) Evidence of adequacy of working capital for this Contract (access to line (s) of credit and availability of other financial resources);
- h) Authority to seek references from the tenderers bankers;
- i) Information regarding any litigation, current or during the last five years, in which the tenderer is involved, the parties concerned and disputed amount; and
- j) Proposals for subcontracting components of the Works amounting to more than 10 percent of the Contract Price.

Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated:

- a) The tender shall include all the information listed in clause 1.5 above for each joint venture partner:
- b) The tender shall be signed so as to be legally binding on all partners:
- c) All partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
- d) One of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of all partners of the joint venture; and
- e) The execution of the entire contract, including payment, shall be done exclusively with the partner in charge.

To qualify for award of the Contract, tenderers shall meet the following minimum qualifying criteria;

- a) (Annual volume of construction work of at least 2.5 times the estimated annual cashflow for the contract;
- b) Experience as main contractor in the construction of at least two works of a nature and complexity equivalent to the works over the last 10 years (to comply with this requirement, works cited should be at least 70 percent complete);

## INSTRUCTIONS

- c) Proposals for the timely acquisition (own, lease, hire, etc) of the essential equipment listed as required for the works;
- d) A Contract manager with at least five years' experience in works of an equivalent nature and volume, including no less than three years as Manager; and
- e) Liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the contract, of no less than 4 months of the estimated payment flow under this Contract.

The figures for each of the partners of a joint venture shall be added together to determine the tender's compliance with the minimum qualifying criteria of clause 1.7 (a) and (e); however, for a joint venture to qualify, each of its partners must meet at least 25 percent of minimum criteria 1.7 (a), (b) and (e) for an individual tenderer, and the partner in charge at least 40 percent of those minimum criteria. Failure to comply with this requirement will result in rejection of the joint ventures tender. Subcontractors experience and resources will not be taken into account in determining the tenderers compliance with the qualifying criteria, unless otherwise stated.

Each tenderer shall submit only one tender, either individually or as a partner in a joint venture. A tenderer who submits or participates in more than one tender (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the tenderers participation to be disqualified.

The tenderer shall bear all costs associated with the preparation and submission of his tender, and the employer will in no case be responsible or liable for those costs.

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

## INSTRUCTIONS



## 2. Tender Documents

The complete set of tender documents comprises the documents listed below and any addenda issued in accordance with Clause 2.4

- a) (These instructions to Tenderers
- b) Form of Tender and Qualification Information
- c) Appendix to Conditions of Contract
- d) Specifications
- e) Drawings
- f) Bills of Quantities
- g) Forms of Securities

The tenderer shall examine all Instructions, Forms to be filled and Specifications in the tender documents. Failure to furnish all information required by the tender documents, or submission of a tender not substantially responsive to the tendering documents in every respect will be at the tenderers risk and may result in rejection of his tender.

A prospective tenderer requiring any clarification of the tendering documents may notify the Employer in writing or by cable, telex or facsimile at the address indicated in the letter of invitation to tender. The Employer will only respond to requests for clarification received earlier than seven days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all persons issued with tendering documents, including a description of the inquiry, but without identifying its source.

Before the deadline for submission of tenders, the Employer may modify the tendering documents by issuing addenda. Any addendum thus issued shall be part of the tendering documents and shall be communicated in writing or by cable, telex or facsimile to all tenderers. Prospective tenderers shall acknowledge receipt of each addendum in writing to the Employer.

To give prospective tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend, as necessary, the deadline for submission of tenders, in accordance with Clause 4.2 herebelow.

## INSTRUCTIONS

### **3. Preparation of Tenders**

- 3.1 All documents relating to the tender and any correspondence shall be in English language.
- 3.2 The tender submitted by the tenderer shall comprise the following: (a) These Instructions to Tenderers, Form of Tender, Conditions of Contract, Appendix to Conditions of Contract and Specifications;
- (b) Tender Security;
  - (c) Priced Bill of Quantities;
  - (d) Qualification Information Form and Documents;
  - (e) Alternative offers where invited; and
  - (f) Any other materials required to be completed and submitted by the tenderers.
- 3.3 The tenderer shall fill in rates and prices for all items of the works described in the Bill of Quantities. Items for which no rate or price is entered by the tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause relevant to the Contract, as of 30 days prior to the deadline for submission of tenders, shall be included in the tender price submitted by the tenderer.
- 3.4 The rates and prices quoted by the tenderer shall only be subject to adjustment during the performance of the Contract if provided for in the Appendix to Conditions of Contract and provisions made in the Conditions of Contract.
- 3.5 The unit rates and prices shall be in Kenya Shillings.
- 3.6 Tenders shall remain valid for a period of 90 days from the date of submission. However, in exceptional circumstances, the Employer may request that the tenderers extend the period of validity for a specified additional period. The request and the tenderers responses shall be made in writing. A tenderer may refuse the request without forfeiting the Tender Security. A tenderer agreeing to the request will not be required or permitted to otherwise modify the tender, but will be required to extend the validity of Tender Security for the period of the extension, and in compliance with Clause 3.7 – 3.11 in all respects.
- 3.7 The tenderer shall furnish, as part of the tender, a Tender Security for the amount specified in the invitation to tender. This shall be in the form of a bank draft or a bank guarantee from an established and reputable bank approved by the Employer.
- 3.8 The format of the Tender Security should be in accordance with the form of Tender Security included in Section G- standard forms or any other form acceptable to the Employer. Tender Security shall be valid for 30 days beyond the validity of the tender.

### **INSTRUCTIONS**

- 3.9 Any tender not accompanied by an acceptable Tender Security shall be rejected. The Tender Security of a joint venture must define as Tenderer all joint venture partners and list them in the following manner: a joint venture consisting of.....and.....
- 3.10 The Tender Securities of unsuccessful tenderers will be returned within 28 days of the end of the tender validity period specified in Clause 3.6.
- 3.11 The Tender Security of the successful tenderer will be discharged when the tenderer has signed the Contract Agreement and furnished and required Performance Security.
- 3.12 The Tender Security may be forfeited
- (a) (If the tenderer withdraws the tender after tender opening during the period of tender validity;
  - (b) If the tenderer does not accept the correction of the tender price, pursuant to Clause 5.7;
  - (c) In the case of a successful tenderer, if the tenderer fails within the specified time limit to
  - (d) (sign the Agreement, or
    - (ii) (Furnish the required Performance Security.
- 3.13 Tenderers shall submit offers that comply with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. Alternatives will not be considered, unless specifically allowed in the invitation to tender. If so allowed, tenderes wishing to offer technical alternatives to the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. In addition to submitting the basic tender, the tenderer shall provide all information necessary for a complete evaluation of the alternative, including design calculations, technical specifications, breakdown of prices, proposed construction methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated tender conforming to the basic technical requirements shall be considered.
- 3.14 The tenderer shall prepare one original of the documents comprising the tender documents as described in Clause 3.2 of these Instructions to Tenderers, bound with the volume containing the Form of Tender, and clearly marked **ORIGINAL**. In addition, the tenderer shall submit copies of the tender, in the number specified in the invitation to tender, and clearly marked as **COPIES**. In the event of discrepancy between them, the original shall prevail.
- 3.15 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the tenderer, pursuant to Clause 1.5 (a) or 1.6 (b), as the case may be. All pages of the tender where alterations or additions have been made shall be initialed by the person or persons signing the tender.

## INSTRUCTIONS

#### 4. Submission of Tenders

- 4.1 The tenderer shall submit the dully filled and stamped tender document through **BUSIA COUNTY IFMIS PORTAL** as appropriate. The inner and outer envelopes shall:
- (a) (be addressed to the Employer at the address provided in the invitation to tender;
  - (b) Bear the name and identification number of the Contract as defined in the invitation to tender; and
  - (c) Provide a warning not to pen before the specified time and date for tender opening
- 4.2 Tenders shall be delivered to the Employer at the address specified above not later than the time and date specified in the invitation to tender. However, the Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with Sub-Clause 2.5 in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline will then be subject to the new deadline.
- 4.3 Any tender received after the deadline prescribed in clause 4.2 will be returned to the tenderer un-opened.
- 4.4 Tenders may modify or withdraw their tenders by giving notice in writing before the deadline prescribed in clause 4.2. Each tenderers modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with clause 3.13 and 4.1, with the outer and inner envelopes additionally marked **MODIFICATION** and **WITHDRAWAL**, as appropriate. No tender may be modified after the deadline for submission of tenders.
- 4.5 Withdrawal of a tender between the deadline for submission of tenders and the expiration of the period of tender validity specified in the invitation to tender or as extended pursuant to Clause 3.6 may result in the forfeiture of the Tender Security pursuant to Clause 3.11.
- 4.6 Tenderers may only offer discounts to, or otherwise modify the prices of their tenders by submitting tender modifications in accordance with Clause 4.4 or be included in the original tender submission.

#### INSTRUCTIONS

## 5. Tender Opening and Evaluation

- 5.1 The tenders will be opened by the Employer, including modifications made pursuant to Clause 4.4, in the presence of the tenderers representatives who choose to attend at the time and in the place specified in the invitation to tender. Envelopes marked **WITHDRAWAL** shall be opened and read out first. Tenderers and Employers representatives who are present during the opening shall sign a register evidencing their attendance.
- 5.2 The tenderers names, the tender prices, the total amount of each tender and of any alternative tender (if alternatives have been requested or permitted), any discounts, tender modifications and withdrawals, the presence or absence of Tender Security, and such other details as may be considered appropriate, will be announced by the Employer at the opening. Minutes of the tender opening, including the information disclosed to those present will be prepared by the Employer.
- 5.3 Information relating to the examination, clarification, evaluation, and comparison of tenders and recommendations for the award of Contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced. Any effort by a tenderer to influence the Employers officials, processing of tenders or award decisions may result in the rejection of his tender.
- 5.4 To assist in the examination, evaluation, and comparison of tenders, the Employer at his discretion, may ask any tenderer for clarification of the tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, telex, or facsimile but no change in the price or substance of the tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered in the evaluation of the tenders in accordance with clause 5.7.
- 5.5 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender (a) meets the eligibility criteria defined in clause 1.7; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the tendering documents. A substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tendering documents, without material deviation or scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the tendering documents, the Employer's rights or the tenderer's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.
- 5.6 If a tender is not substantially responsive, it will be rejected, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
- 5.7 Tenders determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows:
  - (a) (where there is a discrepancy between the amount in figures and the amount in words, the amount in words will prevail; and
  - (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate and the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case the adjustment will be made to the entry containing that error.

## INSTRUCTIONS

- (c) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bill of Quantities, the amount as stated in the Form of Tender shall prevail.
- (d) The error correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the corrected Builders Work (i.e Corrected tender sum less P.C and Provisional Sums)
- (e) The Error Correction Factor shall be applied to all Builders Work ( as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuation of variations.
- (f) The above procedure for the correction of errors and, with concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tender does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 3.11.

5.8 The Employer will evaluate and compare only the tenders determined to be substantially responsive in accordance with clause 5.5.

5.9 In evaluating the tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:

- (a) making any correction for errors pursuant to clause 5.7;
- (b) Excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities, but including Dayworks where priced competitively.
- (c) Making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with clause 3.12; and modifications offered in accordance with clause 4.6

5.10 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in tender evaluation.

5.11 The tenderer shall not influence the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. Any effort by the Tenderer to influence the Employer or his employees in his decision on tender evaluation, tender comparison or contract award may result in the rejection of the tender.

5.12 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

## INSTRUCTIONS

## **6. Award of Contract**

- 6.1 Subject to Clause 6.2, the award of the Contract will be made to the tenderer whose tender has been determined to be substantially responsive to the tendering documents and who has offered the lowest evaluated tender price, provided that such tenderer has been determined to be (a) eligible in accordance with the provision of Clauses 1.2, and (b) qualified in accordance with the provisions of clause 1.7 and 1.8.
- 6.2 Notwithstanding clause 6.1 above, the Employer reserves the right to accept or reject any tender, and to cancel the tendering process and reject all tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the action.
- 6.3 The tenderer whose tender has been accepted will be notified of the award prior to expiration of the tender validity period in writing or by cable, telex, or facsimile. This notification (hereinafter and in all Contract documents called the Letter of Acceptance) will state the sum (hereinafter and in all Contract documents called the Contract Price) that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract. The notification of award will constitute the formation of the Contract, subject to the tenderer furnishing the Performance Security in accordance with clause 6.6 and signing the Agreement and return it to the Employer.
- 6.4 The Agreement will incorporate all agreements between the Employer and the successful tenderer. It will be signed by the Procuring Entity and sent to the successful tenderer, within 30 days following the notification of award. Within 21 days of receipt the successful tenderer will sign the Agreement and return it to the Employer.
- 6.5 Within 21 days after receipt of the Letter of Acceptance, the successful tenderer shall deliver to the Employer a Performance Security in the amount stipulated in the Appendix to Conditions of Contract and in the form stipulated in the Tender documents. The Performance Security shall be in the form of a Bank Guarantee, and shall be issued at the tenderers option, by a reputable bank located in Kenya and acceptable to the Employer.
- 6.6 Failure of the successful tenderer to comply with the requirements of clause 6.5 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Tender Security.
- 6.7 Upon the furnishing by the successful tenderer of the Performance Security, the Employer will promptly notify the other tenderers that their tenders have been unsuccessful.

## **INSTRUCTIONS**

## CONDITIONS OF CONTRACT

### 1. Definitions

- 1.1 In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated;

**Bills of Quantities** means the priced and completed Bill of Quantities forming part of the tender (where applicable).

**The Completion Date means** the date of completion of the Works as certified by the Employer's Representative.

**The Contract means** the agreement entered into by the Employer and the Contractor as recorded in the Agreement Form and signed by the parties.

**The Contractor refers** to the person or corporate body who's tender to carry out the Works has been accepted by the Employer.

**The Contractor's Tender is** completed tendering document submitted by the Contractor to the Employer.

**The Contract Price is** the price stated in the Letter of Acceptance.

**Days are** calendar days; **Months** are calendar months

**A Defect is** any part of the Works not completed in accordance with the Contract.

**The Defects Liability Period is** the period named in the Appendix to Conditions of Contract and calculated from the Completion Date.

**Drawings include** calculations and other information provided or approved by the Employers Representative for the execution of the Contract.

**Employer Includes** Central or Local Government administration, Universities, Public Institutions and Corporations and is the party who employs the Contractor to carry out the Works.

**Equipment is** the Contractor's machinery and vehicles brought temporarily to the Site for the execution of the works.

**Site means** the place or places where the permanent Works are to be carried out including workshops where the same is being prepared.

## CONDITIONS OF CONTRACT



**Materials are** all supplies, including consumables, used by the Contractor for incorporation in the Works.

**Employer's Representative is** the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

**Specification means** the Specification of the Works included in the Contract.

**Start Date is** the date when the Contractor shall commence execution of the Works.

**A Sub-contractor is** a person or corporate body who has a contract with the contractor to carry out a part of the Work in the Contract, which includes Work on the Site.

**Temporary works are** works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

**A variation is** an instruction given by the Employer's Representative which varies the Works.

**The Works are** what the Contract requires the Contractor to construct, install, and turnover to the Employer.

## **2 Contract Documents**

2.1 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority;

- (1) Agreement,
- (2) Letter of Acceptance,
- (3) Contractor's Tender,
- (4) Specifications
- (5) Drawings,
- (6) Bill of Quantities.

## **3. Employer's Representatives Decisions**

3.1 Except where otherwise specifically stated, the Employer's Representative will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

# **CONDITIONS OF CONTRACT**

#### **4. Works, Language and Law of Contract**

- 4.1 The Contractor shall construct and install the Works in accordance with the Contract documents. The Works may commence on the Start Date and shall be carried out in accordance with the Program submitted by the Contractor, as updated with the approval of the Employer's Representative, and complete them by the Intended Completion Date.
- 4.2 The ruling language of the Contract shall be English language and the law governing the Contract shall be the law of the Republic of Kenya.

#### **5. Safety, Temporary works and Discoveries**

- 5.1 The Contractor shall be responsible for design of temporary works and shall obtain approval of third parties to the design of the temporary works where required.
- 5.2 The Contractor shall be responsible for the safety of all activities on the Site.
- 5.3 Any thing of historical or other interest or significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Employer's Representative of such discoveries and carry out the Employer's Representatives instructions for dealing with them.

#### **6. Work Program and Sub-contracting**

- 6.1 Within seven days after Site possession date, the Contractor shall submit to the Employer's Representative for approval a program showing the general methods, arrangements, order and timing for all the activities in the Works.
- 6.2 The Contractor may sub-contract the Works (but only to a maximum of 25 percent of the Contract Price) with the approval of the Employers Representative. However, he shall not assign the Contract without the approval of the Employer in writing. Sub-contracting shall not alter the Contractor's obligations.

### **CONDITIONS OF CONTRACT**

## **7. The Site**

7.1 The Employer shall give possession of all parts of the Site to the Contractor.

7.2 The Contractor shall allow the Employer's Representative and any other person authorized by the Employer's Representative, access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

## **8. Instructions**

8.1 The Contractor shall carry out all instructions of the Employer's Representative which are in accordance with the Contract.

## **9. Extension of Completion Date**

9.1 The Employer's Representative shall extend the Completion Date if an occurrence arises which makes it impossible for completion to be achieved by the Intended Completion Date. The Employer's Representative shall decide whether and by how much to extend the completion Date.

9.2 For the purposes of this clause, the following occurrences shall be valid for consideration;

Delay by: -

- (a) force majeure, or
- (b) reason of any exceptionally adverse weather conditions, or
- (c) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works, or
- (d) reason of the Employer's Representatives instructions issued under these conditions or

CONDITIONS OF CONTRACT

## **10. Management Meetings**

10.1 A Contract management meeting shall be held regularly and attended by the Employer's Representative and the Contractor. Its business shall be to review the plans for the remaining work. The Employer's Representative shall record the business of management meetings and provide copies of the record to those attending the meeting and the Employer. The responsibility of the parties for record to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Employer's Representative either at the management meeting or after the management meeting and stated in writing to all who attend the meeting.

10.2 Communication between parties shall be effective only when in writing.

## **11. Defects**

11.1 The Employer's Representative shall inspect the Contractors work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Employer's Representative may instruct the Contractor to search for a defect and to uncover and test any Work that the Employer's Representative considers may have a defect. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However, if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.

11.2 The Employers Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the Appendix to Conditions of Contract.

11.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Employer's Representative's notice. If the Contractor has not corrected a defect within the time specified in the Employer's Representative's notice, the Employer's Representative will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

## **CONDITIONS OF CONTRACT**

## **12. Bills of Quantities**

- 12.1 The Bills of Quantities shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rates in the Bills of Quantities for each item. Items against which no rate is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the rates for other items in the Bills of Quantities.
- 12.2 Where Bills of Quantities do not form part of the Contract, the Contract Price shall be a lump sum (which shall be deemed to have been based on the rates in the Schedule of Rates forming part of the tender) and shall be subject to re-measurement after each stage.

## **13. Variations**

- 13.1 The Contractor shall provide the Employer's Representative with a quotation for carrying out the variations when requested to do so. The Employer's Representative shall assess the quotation and shall obtain the necessary authority from the Employer before the variation ordered.
- 13.2 If the Work in the variation corresponds with an item description in the Bill of Quantities/Schedule of Rates, the rate in the Bill of Quantities/Schedule of Rates shall be used to calculate the value of the variation. If the nature of the Work in the variation does not correspond with items in the Bill of Quantities/Schedule of Rates, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 13.3 If the Contractor's quotation is unreasonable, the Employer's Representative may order the variation and make a change to the Contract Price, which shall be based on the Employer's Representative's own forecast of the effects of the variation on the Contractor's costs.

## **CONDITIONS OF CONTRACT**

#### **14. Payment Certificates and Final Account**

- 14.1 The Contractor shall be paid after the full value of the works on completion less the certified value for retention which shall be released after the defects liability period.
- 14.2 The Contractor shall supply the Employer's Representative with a detailed final account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer's Representative shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer's Representative shall issue within 21 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Employer's Representative shall decide on the amount payable to the Contractor and issue a Final Payment Certificate. The Employer shall pay the Contractor the amount so certified within 60 days of the issue of the final Payment Certificate.
- 14.3 If the period laid down for payment to the Contractor upon each of the Employer's Representative's Certificate by the Employer has been exceeded, the Contractor shall be entitled to claim simple interest calculated pro-rata on the basis of the number of days delayed at the Central Bank of Kenya's average base lending rate prevailing on the first day the payment becomes overdue. The Contractor will be required to notify the Employer within 15 days of receipt of delayed payments of his intentions to claim interest.

#### **15. Insurance**

- 15.1 The Contractor shall be responsible for and shall take out appropriate cover against, among other risks, personal injury; loss of or damage to the Works, materials and plant; and loss of or damage to property.

#### **16. Liquidated Damages**

- 16.1 The Contractor shall pay liquidated damages to the Employer at the rate 0.001 per cent of the Contract price per day for each day that the actual Completion Date is later than the Intended Completion Date except in the case of any of the occurrences listed under clause 9.2. The Employer may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

### **CONDITIONS OF CONTRACT**

## **17. Completion and Taking Over**

Upon deciding that the Work is complete the Contractor shall request the Employer's Representative to issue a Certificate of Completion of the Works, upon deciding that the Work is completed.

The Employer shall take over the Site and the Works within seven days of the Employer's Representative issuing a Certificate of Completion.

## **18. Termination**

The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of contract shall include, but shall not be limited to, the following;

- (a) the Contractor stops Work for 60 days continuously without reasonable cause or authority from the Employer's Representative;
- (b) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

If the Contract is terminated, the Contractor shall stop Work immediately, and leave the Site as soon as reasonably possible. The Employer's Representative shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

CONDITIONS OF CONTRACT

## **19. Payment Upon Termination**

- 19.1 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on Site, plant, equipment and temporary works.
- 19.2 The Contractor shall, during the execution or after the completion of the Works under this clause, remove from the Site as and when required within such reasonable time as the Employer's Representative may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to him, and in default thereof, the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor.
- 19.3 Until after completion of the Works under this clause, the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefore the Employer's Representative shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract, the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

## **20. Corrupt Gifts and Payments of Commission**

- 20.1 The Contractor shall not;
- (a) offer or give or agree to give to any person in the service of the Employer any gifts or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract with the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Employer.
  - (b) any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or
  - (c) Without the knowledge of the Contractor) shall be an offence under the Laws of Kenya.

## **CONDITIONS OF CONTRACT**



## **21. Settlement of Disputes**

- 21.1 Any dispute arising out of the Contract which cannot be amicably settled between the parties shall be referred by either party to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed by the chairman of the Chartered Institute of Arbitrators, Kenya branch, on the request of the applying party.

CONDITIONS OF CONTRACT'

## APPENDIX TO CONDITIONS OF CONTRACT

The Appendix to the conditions of Contract will be filled in as follows: -

The employer is: **BUSIA COUNTY EDUCATION & VOCATIONAL TRAINING**  
Name:

Telephone: .....

The Project Manager is:

Name: **THE COUNTY WORKS OFFICER  
BUSIA COUNTY  
MINISTRY OF PUBLIC WORKS**  
Address: **P O BOX 470, BUSIA (K)**

Telephone: 0703-495970/0707-641918

The name (and identification number) of the Contract is **PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.**

The Works consist of **PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.**

The start date shall be; **TO BE AGREED WITH THE PROJECT MANAGER**

The Intended Completion Date for the whole of the Works shall be;  
**12 WEEKS AFTER COMMENCEMENT DATE**

The following documents also form part of the Contract:  
**AS LISTED IN CLAUSE 2.1 OF THE CONDITIONS OF CONTRACT**

The Contractor shall submit a revised program for the Works within **\_\_14\_\_** days of delivery of the letter of Acceptance.

The Site Possession Date shall be; **TO BE AGREED WITH EMPLOYER**

The site is located **BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY**

The Defects Liability period is **\_\_180\_\_** days

Other contractors, utilities etc, to be engaged by the Employer on the site  
Include those for the execution of;

APPENDIX TO CONDITION OF CONTRACT

The period between program updates is \_\_\_\_\_**14**\_\_\_\_\_ days.

The amount to be withheld for late submission of an updated program is; **FULL CERTIFICATE**

The proportion of payments retained is \_\_**10**\_\_ percent of the contract sum.

The performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price .....**2**..... percent (%)

The Completion Period for the Works is \_\_**12**\_\_ (weeks)

The Bidder should submit **ONLY ONE (1 NO.) ORIGINAL COPY** of the Bills of Quantities and not Two (2No.) as indicated in clause 4.1 of the Instructions to Tenderers.

## APPENDIX TO CONDITIONS OF CONTRACT

## **STANDARD FORMS**

### **STANDARD FORMS**

- (i) Form of Tender
- (ii) Form of Agreement
- (iii) Form of Tender Security
- (iv) Performance Bank Guarantee
- (v) Bank Guarantee for Advance Payment
- (vi) Qualification Information
- (vii) Tender Questionnaire
- (viii) Confidential Business Questionnaire
- (ix) Details of Sub-Contractors

**STANDARD FORM**

**FORM OF TENDER**

TO: \_\_\_\_\_ (Name of Employer) \_\_\_\_\_ (Date)  
 \_\_\_\_\_ (Name of Contract)

Dear Sir,

1. In accordance with the Constitutions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above-named Works, we, the undersigned offer to construct, install and complete such works and remedy any defects therein for the sum of Kshs. \_\_\_\_\_ (Amount in figures)

Kenya Shillings \_\_\_\_\_  
 \_\_\_\_\_ (Amount in words)

2. We undertake, if our tender is accepted, to commence the works as soon as is reasonably possible after the receipt of the Project Managers notice to commence, and to complete the whole of the works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
3. We agree to abide by this tender until \_\_\_\_\_ (insert date), and it shall remain binding upon us and may be accepted at any time before that date.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Signature \_\_\_\_\_ in the capacity of \_\_\_\_\_

Duly authorized to sign tenders for and on behalf of

\_\_\_\_\_ (Name of Employer)

Of \_\_\_\_\_ (Address of Employer)

Witness, Name \_\_\_\_\_

Address \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**FORM OF AGREEMENT**

THIS AGREEMENT, made the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Between \_\_\_\_\_ of (or whose registered office is situated at) \_\_\_\_\_

(hereinafter called the Employer) of the other part AND

\_\_\_\_\_ ( of ( or whose registered office is situated at)

(hereinafter called the Contractor) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes

(Name and identification number of Contract) (hereinafter called the works) located at \_\_\_\_\_ (place/location of the works) and the execution and completion of such works and the remedying of any defects therein for the Contract Price of Kshs. \_\_\_\_\_ (amount in figures), Kenya Shillings

\_\_\_\_\_ (amount in words)

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e
  - (i) Letter of Acceptance
  - (ii) Form of Tender
  - (iii) Conditions of Contract Part I
  - (iv) Conditions of Contract Part II and Appendix to Conditions of contract
  - (v) Specifications
  - (vi) Drawings
  - (vii) SPriced Bills of Quantities
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenant with the Employer to execute and complete the works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein, the Contract Price or such other sums as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The common Seal of \_\_\_\_\_

Was hereunto affixed in the presence of

\_\_\_\_\_  
Signed sealed, and Delivered by the said

\_\_\_\_\_  
Binding Signature of Employer

\_\_\_\_\_  
Binding Signature of the Contractor

In the presence of (i) Name \_\_\_\_\_

Address \_\_\_\_\_

Signature \_\_\_\_\_

(ii) Name \_\_\_\_\_

Address \_\_\_\_\_

Signature \_\_\_\_\_

Countersigned by (i) Name \_\_\_\_\_

\_\_\_\_\_  
Permanent Secretary – Treasury

Address \_\_\_\_\_

Signature \_\_\_\_\_

STANDARD FORMS

**FORM OF TENDER SECURITY**

WHEREAS .....(hereinafter called the Tenderer) has submitted his tender dated ..... for the construction of.....

.....(*name of contract*)

KNOW ALL PEOPLE by these presents that WE..... Having our registered office at

..... (hereinafter called the Bank), are bound unto .....

.....(hereinafter called the Employer) in the sum of

Kshs..... For which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the common seal of the said Bank this..... day of.....20.....

THE CONDITIONS of this obligation are:

1. If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instruction to tenders  
Or
2. If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
  - (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required, or
  - (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that amount claimed by him is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(signature of the Bank)

\_\_\_\_\_  
(witness)

\_\_\_\_\_  
(seal)

STANDARD FORMS

**PERFORMANCE BANK GUARANTEE**



TO: \_\_\_\_\_ (Name of Employer) \_\_\_\_\_ (Date)  
 \_\_\_\_\_ (Address of Employer)

Dear Sir,

WHEREAS \_\_\_\_\_ (hereinafter called the Contractor) has undertaken, in  
 pursuance of Contract No. \_\_\_\_\_ dated \_\_\_\_\_ to execute  
 \_\_\_\_\_ (hereinafter called the works);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you  
 with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance  
 with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of  
 the Contractor, upto a total of Kshs \_\_\_\_\_ (amount of Guarantee in figures)  
 Kenya Shillings \_\_\_\_\_ ( amount of Guarantee in words), and we  
 undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums  
 within the limits of Kenya Shillings \_\_\_\_\_ (amount of guarantee in words) as aforesaid without  
 your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting  
 us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the  
 works to be performed thereunder or of any of the Contract documents which may be made between  
 you and the Contractor shall in any way release us from liability under this Guarantee, and we hereby  
 waive notice of any change, addition, or modification.

This guarantee shall be valid until the date of issue of the Certificate of Completion.

**SIGNATURE AND SEAL OF THE GUARANTOR**

\_\_\_\_\_

Name of Bank \_\_\_\_\_  
 Address \_\_\_\_\_  
 Date \_\_\_\_\_

**STANDARD FORMS**

**BANK GUARANTEE FOR ADVANCE PAYMENT**

To: \_\_\_\_\_ (name of Employer) \_\_\_\_\_ (Date)

\_\_\_\_\_ (address of Employer)

Gentleman,

Ref: \_\_\_\_\_ (name of Contract)

In accordance with the provisions of the Conditions of Contract of the above mentioned Contract, We, \_\_\_\_\_ (name and Address of Contractor) hereinafter called the Contractor) shall deposit with \_\_\_\_\_ (name of Employer) a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs \_\_\_\_\_ (amount of guarantee in figures) Kenya Shillings \_\_\_\_\_ (amount of guarantee in words)

We, \_\_\_\_\_ (bank of financial institution), as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to \_\_\_\_\_ (name of Employer) on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Kshs \_\_\_\_\_ (amount of guarantee in figures) Kenya Shillings \_\_\_\_\_ (amount of guarantee in words) such amount to be reduced periodically by the amounts recovered by you from the proceeds of the Contract.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between \_\_\_\_\_ (name of Employer) and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the contractor pursuant to the Contract.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until \_\_\_\_\_ (name of Employer) receives full payment of the same amount from the Contractor.

Yours faithfully,

Signature and Seal \_\_\_\_\_

Name of the Bank or financial institution \_\_\_\_\_

Address \_\_\_\_\_

Witness: Name: \_\_\_\_\_

Address: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## STANDARD FORMS

## QUALIFICATION INFORMATION

1. Individual Tenderers or Individual Members of Joint Ventures

1.1 Constitution or legal status of tenderer (attach copy or Incorporation Certificate) Place of registration: \_\_\_\_\_  
Principal place of Business: \_\_\_\_\_  
Power of attorney of signatory of tender: \_\_\_\_\_

1.2 Total annual volume of construction work performed in the last five years.

Year	Volume Currency	Value

1.3 Work performed as Main Contractor on works of a similar nature and volume over the last five years. Also list details of work under way or committed, including expected completion date.

Project name Contract	Name of client and contact person	Type of work performed and year of completion Value of

1.4 Major items of Contractor #s Equipment proposed for carrying out the Works. List all information requested below. Refer also to clause 1.7 (c) of the Instructions to Tenderers.

Item of Equipment number available	Description, Make and age (years) Owned, leased (from whom?), or to be purchased (from whom?)	Condition (new, good, poor) and year of completion

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to clause 1.5 (e) of the Instructions to Tenderers and Clause 9.1 of the Conditions of Contract.

Position Name	Years of experience (general)	Years of experience in proposed position
Project Manager		(etc)

1.6 Proposed subcontracts and firms involved. Refer to Clause 7.1 of the conditions of Contract. Section of the works Value of subcontract Subcontractor (name and address) Experience in similar work \_\_\_\_\_ (etc)

Section of the works	Value of subcontract	Subcontractor (name and address)	Experience in similar work

1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditor#s report, etc. List below and attach copies.


## STANDARD FORM

1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of supportive documents.

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- 1.9 Name, address and telephone, telex and facsimile numbers of banks that may provide reference if contracted by the Employer.

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- 1.10 Statement of compliance with the requirements of Clause 1.2 of the Instructions to Tenderers.

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- 1.11 Proposed program (work method and schedule) in compliance with requirement of clause 1.3 of the instructions to Tenderers. Descriptions, drawings and charts, as necessary, to comply with the requirements of the tendering documents.

2. Joint Ventures

- 2.4 The information listed in 1.1 – 1.10 above shall be provided for each partner of the joint venture.

- 2.5 The information required in 1.11 above shall be provided for the joint venture.

- 2.6 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture.

- 2.7 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that:

- (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
- (b) one of the partners will be nominated as being in charge, authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and
- (c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

STANDARD FORMS

TENDER QUESTIONNAIRE

1. Full names of tenderer

.....

2. Full address of tenderer to which tender correspondence is to be sent  
(unless an agent has been appointed below)

.....

3. Telephone number (s) of tenderer

.....

4. Telex address of tenderer

.....

5. Name of tenderers representative to be contacted on matters of the tender  
During the tender period.

.....

6. Details of Tenderers nominated agent (if any) to receive tender notices.  
This is essential if the tenderer does not have his registered address in  
Kenya (name, address, telephone, telex)

.....

.....

\_\_\_\_\_  
Signature of Tenderer

Make copy and deliver to: \_\_\_\_\_  
(Name of Employer)

STANDARD FORMS

**CONFIDENTIAL BUSINESS QUESTIONNAIRE**

You are requested to give the particulars indicated in Part 1 and either Part 2(a), 2(b) or 2(c) and 2(d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

### **Part 1 – General**

Business Name.....  
 Location of business premises; Country/Town.....  
 Plot No. ....Street/Road.....  
 Postal Address..... Tel.No.....  
 Nature of Business .....  
 Current Trade Licence No. ....Expiring date.....  
 Maximum value of business which you can handle at any time: K. pound.....  
 Name of your bankers .....  
 Branch.....

### **Part 2 (a) – Sole Proprietor**

Your name in full ..... Age.....  
 Nationality ..... Country of Origin.....  
 Citizenship details .....

### **Part 2(b) – Partnership**

Give details of partners as follows:

Name in full	Nationality	Citizenship	Details shares
1. ....			
2. ....			
3. ....			

### **Part 2 (c) – Registered Company**

Private or public.....

State the nominal and issued capital of the company -

Nominal Kshs.....

Issued Kshs.....

Give details of all the director as follows:

Name in full	Nationality	Citizenship Details*	Shares
1. ....			
2. ....			
3. ....			
4. ....			

## STANDARD FORMS

### **Part 2(d) – Interest in the Firm:**

Is there any person/persons in ..... (Name of Employer) who has interest in this firm? Yes/No..... (Delete as necessary).

I certify that the above information is correct.

.....  
(Title)

.....  
(Signature)

.....  
(Date)

Attach proof of citizenship

## STANDARD FORMS

### DETAILS OF SUB-CONTRACTORS

If the Tenderer wishes to sublet any portion of the Works under any heading, he must give below

details of the sub-contractors he intends to employ for each portion.

Failure to comply with this requirement may invalidate the tender.

- (1) Portion of works to be sublet: .....
- (i) Full name of Sub-contractor  
And address of head office:.....
- (ii) Sub-contractors experience of similar works carried out in the last 3 years with  
Contract value: .....  
.....  
.....  
.....
- (2) Portion of works to be sublet: .....
- (i) Full name of Sub-contractor  
And address of head office: .....  
.....  
.....
- (ii) Sub-contractors experience of similar works carried out in the last 3 years  
with Contract value .....  
.....

\_\_\_\_\_  
(Signature of Tenderer)

\_\_\_\_\_  
Date

STANDARD FORMS

**SECTION NO.3**



## **SPECIFICATIONS AND PRICING NOTES**

### **SPECIFICATIONS AND PRICING NOTES**

The contractor should read carefully the following specification for workmanship prepared in accordance with standard specifications for building works 1976 Edition prepared by the Ministry of Public Works

#### **GENERAL ITEMS**

##### **Materials Generally**

##### **A.1**

All materials used on the works shall be new and of the qualities and kinds specified herein be taken and tested if required. No materials shall be used until approved and all materials which are not approved or which are damaged, contaminated or have deteriorated in any way or do not comply in any way with the requirements of this specification shall be rejected and shall be immediately removed from the site at the Contractor's expense.

##### **A.2 Material for which there is a Kenya Bureau of Standard Specification**

All materials used in the works for which a Kenya Bureau of Standards Specification has been published shall conform with the latest edition thereof in every way. The Architect reserves the right to demand that the Contractor shall obtain at his own expense a certificate in respect of any materials to state that is in accordance with the Kenya Bureau of Standard specification.

##### **A.3 Materials for which there is no Kenya Bureau of Standards specification**

All materials used in the works for which no Kenya Bureau of Standard specification has been published shall conform with the British Standards Specification for such materials. If there are no published standards as specified for any materials, the quality of such materials shall be generally of a standard equal to those for which there is a Kenya Bureau of Standards or British Standard Specification.

## **SPECIFICATIONS AND PRICING NOTES**

### **EXCAVATION AND EARTHWORK**

#### **B.1 Site Clearance**

Site clearance shall include the cutting down of all trees, stumps, bushes, vegetation and rubbish, burning the debris arising in approved locations and carting remaining material to a tip provided by the Contractor.

## **B.2 Nature of the Soil**

The Contractor is advised to visit the site and ascertain the nature of the ground to be excavated and he shall price accordingly and no claim will be allowed for want of knowledge in this respect.

Rates for excavation shall include for excavation in soil, earth, black cotton, sandy soil, murram, tuff, soft rock, boulders or whatever other subsoil is encountered except hard rock as defined below.

## **B.3 Foundation Excavations**

- a) The foundation trenches and column bases shall be excavated to the widths and depths of the concrete foundations shown on the drawings or to such widths and depths as the Engineer may instruct after examination of the excavations. Quantities of all excavations shall be measured and valued by the Quantity Surveyor and any difference between such measurements and the measurements herein given shall be dealt with as a variation to the Contract.

If however, the Contractor excavates to any greater depths than shown in the drawings or as instructed by the Engineer, then he shall at his own expense fill in such extra depth of excavation with concrete as specified for the foundations to the satisfaction of the Engineer. The Contractor shall not be paid for the cost of any excavation executed deeper or wider than shown on the drawings or instructed by the Engineer nor the cost of back filling such excavation or disposing of surplus.

## **B.4 Surplus Soil Disposal**

Excavated material not required for subsequent refilling shall be removed to areas off site which shall be approved by the Architect.

## **B.5 Top Soil for Spreading**

where required in the Bills of Quantities, top soil required for subsequent spreading over finished work shall be especially selected and shall be dumped in special heaps as indicated by the Architect. Such top soil shall be reasonably free from vegetation to the satisfaction of the Architect and shall be compacted as little as possible in the heaps.

## **B.6 Filling under Surface Beds in Buildings**

### **i) Murram fillings**

Murram for filling as base course shall be from an approved source and of the highest quality. It shall be laid in layers not less than 150mm thick and not greater than 230mm thick prior to Compaction. Water will be applied to O.M.O and each layer will be thoroughly compacted by at Least 8 passes of a 10 tonne smooth wheeled roller or a 2 tonne vibrating roller until all Movement ceases and 100% C.B.R is obtained.

## **SPECIFICATIONS AND PRICING NOTES**

### **i) Hardcore filling**

Hardcore filling shall be crushed rock, broken concrete or other approved hard granular Materials broken to pass not greater than a 150mm ring or to be 75% of the finished thickness of the layers being compacted whichever is the less and graded so that it can be easily and thoroughly compacted by rolling. The filling is to be laid in layers each of a consolidated thickness not exceeding 230mm.

#### **B.7 Anti-termite treatment**

Where described the top surface of filling shall be treated with Gladiator T C Pesticides to be supplied and applied by Rentokil Ltd P O Box 44360, Nairobi or other equal and approved firm strictly in accordance with the satisfaction of the Architect. The Contractor must destroy any termite nests found within the perimeter of the building and within 20 metres from the building externally and take out and destroy queens, impregnate holes and tunnels with approved insecticide and backfill with hard material, well rammed and consolidated. The specialist shall be required to issue a 10 year guarantee to the Employer.

#### **B.8 Polythene Sheeting**

Polythene sheeting shall be produced by an approved manufacturer. Joints in sheeting shall be treble folded with a 150mm fold and taped at 300mm intervals with 50mm wide black plastic adhesive tapes. The sheeting shall not stretched but shall be laid with sufficient wrinkles to permit shrinkage up to 15%.

The Contractor shall ensure that the membrane is not pierced during laying and concreting.

#### **B.9 Existing Services**

Before commencing works, the Contractor shall at his own expense ascertain in writing from the relevant Local Authorities and all other Public bodies, companies and persons who may be affected, the position and depths of their respective ducts, cables, mains or pipes and appurtenance. He shall thereupon search for and locate such services.

Active existing services shall be adequately protected from damage or relocated as directed by the Architect. Inactive services shall be removed or sealed off in accordance with the direction of the Architect.

#### **B.10 Protection**

The Contractor shall protect all graded and filled areas from the actions of the elements. Any settlement or washing away that occur prior to acceptance of the works shall be repaired and grades re-established to the required elevations and slopes.

### **SPECIFICATIONS AND PRICING NOTES**

#### **CONCRETEWORK**

**C. 1 Codes of Practice**

All workmanship, materials, tests and performances in connection with reinforced concrete shall be in conformity with the latest edition of the British Standard for concrete works 9B.S. B110 parts 1 & 2, B. S 8004, B.S 8007) and any other approved Local and International Standards. Where inconsistency exists between these preambles and these Standards, the Contractor shall notify the Engineer in good time for his Clarification as to which of the two implications on the Contract.

**C.2 Supervision**

A competent person approved by the Engineer shall be employed by the Contractor whose duty will be to supervise all stages in the preparation and placing of the concrete. All cubes shall be made and site tests carried out under his direct supervision on Consultation with the Engineer.

**C. 3 Cement**

Cement unless otherwise specified shall be ordinary Portland Cement of a brand and source approved by the Engineer and shall comply with the requirements of K.S. 02-21. a manufacturers certificate of test in accordance with K.S. 02-21 shall be supplied for each consignment delivered to the Site.

**C. 4 Aggregate**

Aggregates shall conform with the requirement K.S. 02 – 95 and all the proposed sources, Types and grading test results of all aggregates are to be approved in all respects by the Engineer before work commences.

If in the opinion of the Engineer the aggregate meets with the above requirements but is dirty or adulterated in any manner it shall be screened and/or washed with clean water at the Contractors expense.

Aggregate shall be delivered to the Site in their prescribed sizes or gradings and shall be stock-piled on paved areas to boarded platforms in separate units to avoid intermixing. **On no account shall premixed cores aggregates be brought to the patching plant. On no account shall aggregates be stock-piled on the ground.**

**C. 5 Water**

The water used for mixing concrete shall be from an approved source, clean, fresh and free from harmful matter and comply with the requirements of B.S. 3148.

## SPECIFICATIONS AND PRICING NOTES

**C. 6 Quality Control at Work Stage**

Once the concrete mix is accepted from preliminary to works stages, the principal bases of control shall be analysis of the cube test results at 28 days.

#### C. 7 Cement

The Quantity of cement shall be measured by weight. Where delivered in bags, each batch of concrete is to contain one or more bags of cement in accordance with the proportions specified.

For non-structural concrete, volume batching may be used as indicated below: -

Class of concrete	15	10
Nominal mix by volume	1:3:6	1:4:8
Cubic metres of fine aggregate Per 50kg. bag of cement	0.12	0.16
Cubic metres of coarse aggregate Per 50kg bag of cement	0.24	0.32
Max. size of coarse aggregate	40mm* 40mm*	

\*or 20mm for blinding concrete where described.

Where batching is by volume, approved gauge boxes of such a size as will give the correct proportions shall be used, and full account shall be taken of bulking due to high moisture content.

#### C. 8 Construction Joints

Construction joints shall be permitted only at the positions predetermined on the drawings or as instructed on the site by the Engineer. In general they shall be located at points of minimum shear, viz, vertical at, or near midspans of slabs, ribs and beams.

#### C.9 Faulty Concrete

Any concrete which fails to comply with these Preambles, or which shows signs of setting before it is placed shall be taken out and removed from the site, where concrete is found to be defective after it has set the concrete shall be cut out and replaced in accordance with the Engineer's instructions. **On no account shall any faulty honey combed, or otherwise defective concrete be repaired or patched until the engineer has made an inspection and issued instruction for the repair.**

#### C.10 Steel reinforcement

The steel reinforcement shall comply with the latest requirements of the following British Standards:

### SPECIFICATIONS AND PRICING NOTES

Hot rolled MS for the

	Reinforcement of concrete	KS 02 – 22
	Hot rolled MS for the Reinforcement of concrete	KS 4449
	Cold worked H.Y steel for the Reinforcement of concrete	BS 4461
	Hard drawn steel wire	BS 4482
C.11	<b>Fabric Reinforcement</b>	
	Fabric reinforcement shall be electrically cross-welded steel wire mesh reinforcement to B.S 4483 and of the size and weight specified and made of wire to B.S 4482.	
C. 12	<b>Fixing Steel Reinforcement</b>	
	Reinforcement shall be accurately bent to the shapes and dimensions shown on the Drawings and Schedules and in accordance with B.S 4466 and B.S 8110. Reinforcement must be cut and bent cold and no welded joints will be permitted unless to detailed or directed by the Engineer.	
C. 13	<b>Formwork</b>	
	The method and system of formwork which the Contractor proposed to use shall be approved by the Engineer before construction commences. Formwork shall be substantially and rigidly constructed of timber, steel, plastic, precast concrete or other approved material.	
	All timber formwork shall be good, sound, clean, sawn, well – seasoned timber free from warps and loose knots and of scantlings sufficiently strong for their purpose.	

## SPECIFICATIONS AND PRICING NOTES

**WALLING**

**MATERIALS****D. 1 Cement**

Cement used for making mortar shall be as described in concrete work

**D. 2 Lime**

The lime for making mortar shall be obtained from an approved source and shall comply with BS 890 Class A for non-hydraulic lime. The lime to be run to putty in an approved lined pit or container. The water to be first run into the pit or container and lime to be added until it is completely submerged, stirred vigorously until all lumps are disintegrated and shall be kept constantly covered with water and regularly stirred for at least four weeks. The resulting milk – lime then to be run through a fine sieve and run into a pit or other container and kept clean and moist for not less than two weeks before being used in the works.

**D. 3 Sand**

Sand used for making mortar shall be clean, well graded siliceous sand of good hard had quality equal to samples which shall be deposited with and approved by the Architect. It shall be free from lumps of stone, earth, loam, dust, salt, organic matter and other deleterious substances, passed through a fine sieve and washed with clean water so directed by the Architect.

**D.4 Water**

Shall be as described in Concrete work.

**D. 5 Stone**

All stone shall comply with the requirements of CP 121.202 for masonry and rubble walls respectively except where amended or extended by the following clauses.

**D. 6 Reinforced walls**

Steel reinforcing bars in walls shall be carefully placed and spacers used to ensure that a minimum of 20mm cover is given to the reinforcement unless otherwise specified.

Horizontal reinforcement in mortar joints shall be laid such that the reinforcement is not in contact with the blocks or stone.

**D. 7 Wall Ties**

Wall ties shall be provided to connect walls to steel or concrete columns and beams to connect two unbounded leaves of wall.

**SPECIFICATIONS AND PRICING NOTES**

Wall ties shall be provided at 450mm centres both vertically and 900mm centres horizontally and shall be staggered when used to connect two leaves of unbounded wall. Wall ties shall

be embedded into each material by a minimum of 50mm.

**D. 8 Fair Face**

All concrete and hollow blockwork described as finished with a fair face is to be built to a true and even face with the joints finished as specified hereinafter.

**D. 9 Pointing**

Pointing of walls shall be prepared for pointing by raking out all loose or friable material to a minimum of 15mm to form a square recess. The joints shall then be wetted and new mortar shall be forced into the joints and finished as directed.

**GLAZING**

**MATERIALS**

**E. 1 General**

Glass used in glazing and for mirrors shall be best quality clear glass free from visible defects so that to afford uninterrupted vision or reflection as appropriate and without obvious distortion.

**E. 2 Standards**

Glass for glazing and mirrors shall be approved manufacture and is to comply with B. S 952 in all respects free from flaws, bubbles, specks and other imperfections.

**E. 3 Clear sheet glass etc.**

The clear sheet glass shall be ordinary glazing (OG) quality.

**E. 5 Obscured Glass**

To be of type described and as approved Architect.

**E. 6 Putty**

The putty of glazing to wood sashes is to be linseed oil putty all as B.S. 644

**Workmanship**

**E.7 General**

Glazing of all types in all locations shall be carefully executed by artisans skilled in this type of work and in conformance with the recommendations of CP 152. glazing shall be carefully fitted so that it is not subject to pressure and stresses imposed by being an over tight fit within framing.

**SPECIFICATIONS AND PRICING NOTES**

**METAL WORK**



**MATERIALS****F. 1 Generally**

All materials shall be best for their respective kinds free from defects and all work is to be carried out in the most workmanlike manner and strictly as directed by the Architect. The materials in all stages of transportation, handling and stacking shall be kept clean and prevented from injury by breaking, bending or distortion and weather action.

**F. 2 Mild Steel**

Mild steel shall comply with B.S 15

**F. 3 Hollow Section Tubing**

Square and rectangular hollow section tubing shall be hot rolled mild steel in accordance with Grade 43C of B. S 4360.

**F. 4 Bolts, Nuts and Washers**

These shall be fabricated from materials which comply with B. S 15 and each manufactured item shall comply with the appropriate B. S.

**F. 5 Galvanized Sheet Steel**

To be No. 24 S.W.G. of approved manufacture to B.S 2989 of quality mild steel sheets cold rolled close annealed patent flattened and hot dip galvanized.

**F. 6 Stainless Steel**

Stainless steel tube shall be Austenitic Steel B. S comparable to B. S. 1449 Type 316 S 16

**F. 7 Steel Grills**

Steel Grills shall be manufactured from section conforming with B.S 990 of heavy duty sections of the metric W20 range of approved manufacturer and design approved by the Architect.

After manufacture and before delivery to site steel windows are to be hot galvanized by dipping in a bath of molten zinc or painted with one coat primer.

## SPECIFICATIONS AND PRICING NOTES

**WORKMANSHIP**

## **F. 8 Welding**

All welding is to be in accordance with the requirements with the requirements of B.S.1856 and 938 the electrodes shall comply with b.s. 639.

## **F.9 Painting**

All steel is to be wire brushed and any loose scale, dirt or grease shall be removed before any painting is commenced. One coat of red oxide primer type A to B.S. 2523 shall be applied at the shop.

Any damage to the printing paint shall be made good to the Architects satisfaction.

## **F.10 Fixing of Steel Grilles**

Fixing of metal grilles shall include for assembling and fixing, including screwing to sub-frames or cutting mortices for lugs in concrete or walling and running with cement mortar 91:4), bedding frames in similar mortar, pointing in mastic, bedding sills, transoms and mullions in mastic, making good finishing around both sides and fixing, and adjusting all fittings and frames.

## **FLOOR, WALL AND CEILING FINISHINGS**

### **PLASTERWORK**

## **G.1 Generally**

Render, both internal and external shall be cement and sand in the proportions 1:4 finished to the thickness specified.

Plaster shall consist of an undercoat of 1-part cement to 6 parts sand by volume, and a finishing coat of 1 part cement to 10 parts lime putty. Each coat shall be finished to the thickness specified.

## **G. 2 Cement**

Ordinary Portland cement and shall comply with K.S. 02 – 2. White and coloured cements shall comply with B.S. 12 and be obtained from an approved manufacturer.

## **G.3 Lime**

Lime shall be prepared from hydrated lime complying with B.S. 890, Part 2.

## **G.4 Sands**

Sands for cement and lime mixes shall comply with B.S. 1199, Table 1.

## **G.5 Water**

Water shall be clean and kept free from all impurities.

## **SPECIFICATIONS AND PRICING NOTES**

## **G. 6 Mixing of materials**

All materials shall be thoroughly mixed in the proportions described. No mixes of plasters, other than described shall be used.

**G. 7 Period between coats**

Cement – lime undercoats shall be allowed to dry out thoroughly before a further coat is applied.

**G.8 Surfaces of bed and backings**

Screeded beds for insitu finishings of floor finishings bedded in mortar, shall be left rough from the screeding board

Floated beds for inflexible floor finishings bedded in mastic, shall be left with a plain untextured surface.

Trowelled beds for flexible finishings shall be finished smooth and free from score marks, grooves or depressions.

Screened backings for inside wall finishing's or wall finishings bedded in mortar shall be scratched for key.

Floated backings for flexible wall finishings shall be finished smooth and free from score marks or depressions.

Beds and Backings for finishings by specialists shall be to the approval of the specialist.

**G. 9 Preparation of surfaces**

All surfaces to receive the finishings in this section shall be thoroughly cleaned. Screeds to receive finishings bedded in mortar shall be well wetted before laying is commenced.

**SPECIFICATIONS AND PRICING NOTES**

**PAINTING AND DECORATING**

**MATERIALS****MATERIALS****H. 1 Colour range**

Painting and decorative schemes shall be carried out in colours selected by the Architect from the approved range of colours.

**H. 2 Approval of brands**

The Contractor shall seek, in writing, approval from the Architect for all brands of paint he wishes to use.

**H.3 Quality of Products**

Where a type of paint is produced by the Manufacturer in more than one quality, only paints and materials of the first or best quality shall be used in the works. The container label shall indicate clearly the quality of the paint being used.

Where it is not evident that the first or best quality of paint is being used, the Architect will order the removal of such materials from the site and rectification of any work executed with those materials, all at the Contractor's expense.

**H. 5 Some makers materials used for coating**

While materials for the work may be obtained from several makers, undercoats and finishing coats for a particular surface must be obtained from the same maker, (i.e. one maker's undercoat).

**H. 8 Remedying defects due to defective materials**

All materials, which in the opinion of the Architect are unsatisfactory shall be immediately removed from the site and any work executed with such defective materials shall be made good by the Contractor, at his expense, to the satisfaction of the Architect.

**H. 15 Emulsion paint**

Emulsion paint (interior and/or exterior), shall have a P.V.A base and shall be of an approved brand.

The first coat shall be thinned in accordance with the manufacturer's instructions. Where described as applied externally, the paint shall incorporate an approved fungicide to prevent fungus growth.

**H. 16 Black Bituminous paint**

Black bituminous paint shall comply with B.S. 3416, Type 1 for general use, Type ii for drinking water tanks

**SPECIFICATIONS AND PRICING NOTES****H. 20 Primer for iron and steelwork**

Primer for iron and steelwork shall be: -

- (a) Load based priming paint complying with B.S 2523, Type B.
- (b) Calcium plumbate priming paint complying with B.S 3698, Type A

**H. 25 Primer for woodwork**

Primer for internal woodwork, other than the internal surfaces of external doors, windows and their frames and backs of frames and linings, etc. in contact with masonry, concrete or plaster, shall be leadless white or light grey priming paint not darker than 9 – 093 of B.S 4800 which shall be compatible with the subsequent coats and obtained from the same maker.

**H. 26 Oil paints**

Hard gloss, semi-gloss matt and flat oil paints, and respective undercoats, shall be approved quality, as appropriate.

**H. 27 Polyurethane lacquer**

Polyurethane lacquer shall be an approved single pack, or two pack lacquer as described of interior or exterior quality, as appropriate.

**H. 31 Plaster, rendering, concrete blockwork and brickwork**

All plaster or mortar splashes, etc shall be removed from plaster rendering, concrete, block work and brickwork by careful scraping; all holes, cracks etc, shall be stopped and the whole of the surfaces shall be brushed down to remove dust and loose materials. In addition, all traces of mould oil shall be removed from concrete surfaces by scrubbing with water and detergent and rinsing with clean water to remove all detergent.

**H. 35 Iron and steel**

Before fixing, all rust and scale shall be removed from iron and steel surfaces by wire-brushing, scraping, hammering, flame cleaning etc.

**H.37 Hardwood**

All dirt and grease shall be removed from hardwood surfaces. After priming, all nail holes and other imperfections shall be stopped.

**H. 38 Fibreboard**

All dirt shall be brushed off from fibreboard surfaces. After priming all nail holes and other imperfections shall be stopped.

**SPECIFICATIONS AND PRICING NOTES**

**H. 39 Plywood**

Surfaces of plywood to be painted shall be filled as required with a plaster-based filler for Internal work, and a filler as described in stopping here before for external work, and then rubbed down and all dust and loose materials brushed off.

**H. 40 Woodwork to be painted**

Before fixing woodwork, all surfaces which will be visible after fixing shall be rubbed down and all knots and resin pockets shall be scorched back and coated with knotting.

After priming and fixing, all nail holes and other imperfections shall be stopped and the whole surface shall be rubbed down and all dust brushed off.

**H. 41 Woodwork to receive clear finish.**

All holes and other imperfections in surfaces to receive a clear finish shall be stopped and the whole surface shall be rubbed down to a fine satin finish and all dust brushed off.

**Workmanship**

**H. 42 Standard of workmanship**

Prior to the commencement of internal or external decoration, areas not exceeding 50 square metres in total area, and designated by the architect, shall be completely decorated, and after approval shall be used as a standard for the whole of the works. Any additional cost involved in carrying out such decoration in advance of the general work shall be deemed to be included in the Contract Sum. Such decorated surfaces shall be made good and touched up as necessary prior to the handing over of the works.

**H.43 Stirring of materials**

The contents of all cans and containers of all materials must be properly and thoroughly stirred before and during use and shall be suitably strained as and when necessary.

**H. 44 Manufacturers instructions**

All materials shall be used strictly in accordance with instructions issued by the manufacturers concerned. The addition of thinners, driers or other materials will only be permitted when specially required by the maker and the procedure approved by the Architect.

**SPECIFICATIONS AND PRICING NOTES**

**H. 45 Brush work**

Unless otherwise described, all coatings shall be applied by Brush. Written permission must be obtained from the Architect for the application of coatings by spray or roller where not so described, and if permission is granted, such application shall not result in extra cost to the Employer.

## SPECIFICATIONS AND PRICING NOTES

<i>ITEM NO.</i>	<b>PARTICULAR MATTERS</b>	<i>Amount Kshs.</i>	
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A	<p><b>VALUE ADDED TAX;</b>          The contractor shall allow for 16% Value Added Tax (V.A.T) In his/her built up rates.          Please note that the Government is no longer deducting the 16% VAT.          All obligations to pay all taxes, including VAT shall be borne by the contractor.</p> <p><b>B</b></p> <p><b>FIRM PRICE CONTRACT</b>          This is a firm price contract and the Contractor must allow in his tender rates for any increase in the cost of labour and/or materials during the currency of the contract.</p>		
	KSHS		

ITEM NO.		Amount Kshs.	
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A	<p><b>SCOPE OF CONTRACT</b></p> <p>The works to be carried out under this contract comprise <b>OF COMPUTER LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.</b></p> <p>DESCRIPTION OF THE WORKS for <b>PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC IN BUTULA SUB-COUNTY-BUSIA COUNTY.</b></p>		
B	<p>The total gross approximate slab area is 188 square metres. The total Plinth area is given without warranty but for guidance only.</p> <p>MEASUREMENTS</p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately e referred to the Project Manager.</p>		
C	<p><b>LOCATION OF SITE</b></p> <p>The site for works is located within; <b>BUTULA SUB-COUNTY-BUSIA COUNTY.</b></p>		
D	<p>The tenderer shall be deemed to have visited the site and familiarized himself with all site conditions prior to submission of tenders.</p> <p>No claims arising from the tenderers failure to do so will be entertained.</p>		

ITEM NO.		Amount Kshs.	
A	<p><b>EXISTING BUILDING SERVICES</b></p> <p>Special precautions shall be required throughout the contract period to avoid damage to the existing cables, drains and other services.</p> <p>The contractor shall allow for making good any damage arising from his actions during execution of this contract at his own expense.</p>		
B	<p><b>GENERAL</b></p> <p>The contractor is referred to the General Specifications for Building Works 1976 Edition Pages B1 – B2 inclusive and must allow for all costs in complying with these clauses.</p>		
C	<p><b>CONTRACT COMPLETION PERIOD</b></p> <p>The contract completion period in accordance with condition 31 of the conditions of contract must be strictly adhered to.</p> <p>The PROJECT MANAGER shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary; the PROJECT MANAGER shall inform the Contractor in writing that his actual performance on site is not satisfactory.</p> <p>In all such cases, the Contractor shall accelerate his rate of performance, production and progress by all means such as additional labour, plant e.t.c, and working overtime all at his cost.</p>		
D	<p><b>WORKING CONDITIONS</b></p> <p>The Contractor shall allow in his rates for any interference that he may encounter in the curse of execution of the works for the Client may in some cases ask the Contractor not to proceed with the works until some activities within the site are completed.</p>		
		KSHS	
Section No. 1 Bill No. 1 PARTICULAR MATTERS			

ITEM NO.		Amount Kshs.	
A	<b>SIGN BOARD</b>  Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.		
B	<b>LABOUR CAMPS</b>  The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.		
C	<b>MATERIALS FROM DEMOLITIONS</b>  Any materials arising from demolitions and not re-used shall become the property of the government. The Contractor shall allow in his rates the cost of assembling and keeping them in the office yard.		
D	<b>PRICING RATES</b>  The tender shall include for all costs in executing the whole of the Works, including transport, replacing damaged items, fixing all to comply with the said Conditions of Contract.		
		KSHS	
	Section No. 1 Bill No. 1 PARTICULAR MATTERS		

ITEM		Amount	
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NO.		Kshs.	
A	<b>PARTICULAR INSERTIONS TO BE MADE IN APPENDIX TO CONTRACTOR AGREEMENT</b>		
	1. Period of Final measurements	3Months from practical completion	
	2. Defects liability period	6 Months from practical completion	
	3. Date of possession	To be agreed with Project Manager	
	4. Date of completion	16 weeks' after Commencement	
	5. Liquidated and Ascertained Damages	At the rate of Kshs. 10,000 per week or part thereof	
	6. Period of issuing interim certificates	Monthly	
	7. Period of honouring certificates	Thirty (30) days	
	8. Percentage certified value retained	10%	
	9. Limit of Retention Fund	10% of contract sum	
	10. Bonds	The bonds required shall be from Approved Banking institutions only	
	KSHS		
	Section No. 1 Bill No. 1 PARTICULAR MATTERS		



A	The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.																										
B	<p>ABBREVIATIONS</p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows: -</p> <table><tr><td>C.M.</td><td>Shall mean cubic metre</td></tr><tr><td>S.M.</td><td>Shall mean square metre</td></tr><tr><td>L.M.</td><td>Shall mean linear metre</td></tr><tr><td>MM</td><td>Shall mean millimeter</td></tr><tr><td>Kg.</td><td>Shall mean Kilogramme</td></tr><tr><td>No.</td><td>Shall mean Number</td></tr><tr><td>Prs</td><td>Shall mean Pairs</td></tr><tr><td>B.S</td><td>Shall mean the British Standard Specifications Publishes by the British Standards Institution, 2 Park Street, London W.I</td></tr><tr><td>Ditto</td><td>Shall mean the whole of the preceding description except as qualified in the description in which it occurs</td></tr><tr><td>M.S</td><td>Shall mean measured separately</td></tr><tr><td>a.b.d</td><td>Shall mean as before described</td></tr><tr><td>P.M</td><td>Shall mean Project Manager</td></tr></table>	C.M.	Shall mean cubic metre	S.M.	Shall mean square metre	L.M.	Shall mean linear metre	MM	Shall mean millimeter	Kg.	Shall mean Kilogramme	No.	Shall mean Number	Prs	Shall mean Pairs	B.S	Shall mean the British Standard Specifications Publishes by the British Standards Institution, 2 Park Street, London W.I	Ditto	Shall mean the whole of the preceding description except as qualified in the description in which it occurs	M.S	Shall mean measured separately	a.b.d	Shall mean as before described	P.M	Shall mean Project Manager		
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ITEM NO.		Amount Kshs.	
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A	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b></p> <p>Attendance; clause B19 (a) of the Standard Method of Measurement is deleted and the following clause is substituted: -</p> <p>Attendance on nominated sub-contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary; providing space for office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct covers, pipe casings an the like necessary for the execution and testing of sub-contractors' work and being responsible for the accuracy of the same.</p> <p>B Fix only: -          "Fix Only" shall mean take delivery at nearest railway station (unless otherwise stated), pay all demurrage charges, load and transport to site where necessary unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p> <p>The <b>Employer</b> is: <b>THE CHIEF OFFICER EDUCATION AND VOCATIONAL TRAINING</b></p> <p>PROJECT MANAGER          The term "P.M" wherever used in these Bills of Quantities shall be deemed to imply the Project Manager as defined in condition 1 of the conditions of Contract or such person or persons as may be duly authorized t represent him on behalf of the Government.</p> <p>C ARCHITECT          The term "Architect" shall be deemed to mean "The P.M. as defined above whose address unless other wise notified is County Works Officer, P.O. Box 470-50400, BUSIA(K)</p> <p>D QUANTITY SURVEYOR          The term "Quantity Surveyor" shall be deemed to mean "The P.M" as defined above whose address unless otherwise notified is County Works Officer, P.O. Box 470-50400, BUSIA(K)</p> <p>E</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1          Bill No. 2          GENERAL MATTERS</p>		
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ITEM		Amount	
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NO.		Kshs.	
A	ELECTRICAL ENGINEER		
	<p>The term "Electrical Engineer" shall be deemed to mean "The P.M." as defined above whose address unless otherwise notified is County Works Officer, P.O... Box 470-50400, BUSIA(K)</p>		
B	MECHANICAL ENGINEER		
	<p>The term "Mechanical Engineer" shall be deemed to mean "The P.M." as defined above whose address unless otherwise notified is County Works Officer, P.O. Box 470-50400, BUSIA(K)</p>		
C	STRUCTURAL ENGINEER		
	<p>The term "Structural Engineer" shall be deemed to mean "The P.M." as defined above whose address unless otherwise notified is County Works Officer, P.O. Box 470-50400, BUSIA(K)</p>		
D	FORM OF CONTRACT		
	<p>The form of Contract shall be as stipulated in the Republic of Kenya's Standard Tender Document for Procurement of building Works (2000 Edition) included herein. The Conditions of Contract are also included herein.</p>		
E	CONDITIONS OF CONTRACT		
	<p>These are numbered from 1 to 21 as set out in pages 15 to 25 of these tender documents. Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities.</p>		
F	BOND		
	<p>The Contractor shall find and submit on the Form of Tender and approved bank and who will be willing to be bound the Government in an amount equal to Two percent (2%) of the Contract amount for the due performances of the Contract up to the date of completion as certified by the PROJECT MANGER and who will when and if called upon, sign a bond to that effect on the relevant standard form included herein. (Without the addition of any limitations) on the same day as the Contract Agreement is signed, by the Government, the Contractors shall furnish within seven days another surety to the approval of the Government.</p>		

ITEM NO.		Amount Kshs.	
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A	<p><b>PLANT, TOOLS AND VEHICLES</b></p> <p>Allow for providing all scaffolding plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works for any kind shall be used afterwards in the permanent work.</p>		
B	<p><b>TRANSPORT</b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>		
C	<p><b>MATERIALS AND WORKMANSHIP</b></p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p>		
D	<p><b>SIGN FOR MATERIALS SUPPLIED</b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT MANGER at the current market prices including Customs Duty and V.A.T., all at the contractor's own cost and expense, to the satisfaction of the PROJECT MANAGER.</p>		
E	<p><b>STORAGE OF MATERIALS</b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>		
	<p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		

ITEM		Amount	
NO.		Kshs.	

A	<p><b>SAMPLES</b></p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT MANAGER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the ministry of Roads, Housing and Public Works.</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER. The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p> <p><b>B GOVERNMENT ACTS REGARDING WORK PEOPLE ETC.</b></p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular, the Contractor's attention is drawn to the provision of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health a welfare of the workpeople.</p> <p>The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. it is most important that the contractor, before tendering, shall obtain form the relevant Authority the fullest information regarding all such and regulations an/or restrictions which may affect the organization of the works, supply and control of labour, etc, and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.</p> <p><b>C SECURITY OF WORKS ETC.</b></p> <p>The Contractor shall be entirely responsible for the security of all the works stores materials, plant, personnel, etc, both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		
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ITEM NO.		Amount Kshs.	
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A	<p><b>PUBLIC AND PRIVATE ROADS</b></p> <p>Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority the PROJECT MANAGER.</p>		
B	<p><b>EXISTING PROPERTY</b></p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER.</p>		
C	<p><b>VISIT SITE AND EXAMINE DRAWINGS</b></p> <p>The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect this tender. No claim arising from his failure to comply with this recommendation will be considered.</p>		
D	<p><b>ACCESS TO SITE AND TEMPORARY ROADS</b></p> <p>Means of access to the Site shall be agreed with the PROJECT MANAGER prior commencement of the work and Contractor must allow for building any necessary temporary access roads (approximately 70 metres long) for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the contractor shall remove such temporary access roads; temporary culverts, bridges, etc and make good and reinstate all works and surfaces distributed to the satisfaction of the PROJECT MANGER. The Contractor should also allow for relocating existing fence (approximately 30 metres long).</p>		
E	<p><b>AREA TO BE OCCUPIED BY THE CONTRACTOR</b></p> <p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc, shall be defined on site by the PROJECT MANAGER</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		

ITEM NO.		Amount Kshs.
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A	<p><b>OFFICE ETC. FOR THE PROJECT MANAGER</b>  The Contractor shall provide, erect and maintain where directed on site an afterwards dismantle the site office of the type approved by the Project Manager, complete with Furniture. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock – up type water or bucket closet for the solo use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government of Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the “PROJECT MANAGER” a modern and accurate level together with leveling staff, ranging rods and 50 metre metallic or linen tape.</p> <p><b>B WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b>  The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters as required as this own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT MANAGER. The contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the contractor must make his own arrangements for augmenting this supply at his own cost. Nominated sub-contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p> <p><b>C SANITATION OF THE WORKS</b>  The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER.</p> <p><b>D SUPERVISION AND WORKING HOURS</b>  The works shall be executed under the direction and the entire satisfaction in all respects of the PROJECT MANAGER who shall at all times during normal working hours have access to the works and to the yards and workshops of the contractor and sub-contractors or other places where works is being prepared for the contract.</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1  Bill No. 2  GENERAL MATTERS</p>		
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ITEM NO.		Amount Kshs.	
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A	<p><b>PROVISIONAL SUMS</b> The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurement mentioned in Condition No. 16 of the condition of Contract. Such sums are net and no addition shall be made to them for profit.</p> <p><b>B PRIME COST (OR P.C) SUMS</b> The term "Prime Cost Sum" or "P. C Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement mentioned in Condition No. 16 of the conditions of Contract. Persons or firms nominated by the PROJECT MANAGER to execute work or to provide and fix materials or goods as stated in condition No. 20 of the Conditions of Contract are described herein as nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as nominated Suppliers.</p> <p><b>C PROGRESS CHART</b> The Contractor shall provide within two weeks of Possession of Site and in agreement with the PROJECT MANAGER a progress chart of the whole of the works including the works of Nominated Sub-Contractors; one copy and be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress can be recorded and chart to be amended as necessary as the work proceeds.</p> <p><b>D ADJUSTMENT OF P.C. SUMS</b> In the final account all P.C sums shall be deducted, and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of the m added to the Contract Sum. The contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. In terms of profit upon P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rte column in respect of them.</p> <p>Should the contractor be permitted to tender, and his tender be accepted of any work for which a P.C Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		
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ITEM NO.		Amount Kshs.	
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A	<p><b>ADJUSTMENT OF PROVISIONAL SUMS</b></p> <p>In the final account all Provisional Sums shall be deducted at the value of the works properly executed in respect of them upon the PROJECT MANAGER'S order added to the Contract Sum. Such work shall be valued as described for variations in conditions No. 13 of the Conditions of Contract, but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>		
B	<p><b>NOMINATED SUB-CONTRACTORS</b></p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts as described in Condition No. 8 of the Conditions of Contract and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractor's work concerned in the P.C Sums under the description "add for Attendance".</p>		
C	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C Sum the priced bills of Quantities will be adjusted as described for P.C. Sum and allowed.</p>		
D	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC</b></p> <p>The contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor shall, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after he work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent at rates provided in these Bills.</p>		
	<p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>	KSHS	

ITEM NO.		Amount Kshs.	
A	<p><b>INSURANCE</b></p> <p>The Contractor shall insure as required in conditions Nos.30 of the Conditions and Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT MANAGER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER'S inspection.</p>		
B	<p><b>PROVISIONAL WORK</b></p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at this own expense.</p>		
C	<p><b>ALTERATIONS TO BILLS, PRICING, ETC.</b></p> <p>Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the tender be disqualified and will in any case be ignored. The contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>		
D	<p><b>BLASTING OPERATIONS</b></p> <p>Blasting will only be allowed with the express permission of the PROJECT MANAGER in writing. All blasting operations shall be carried out at the Contractor's solo risk and cost in accordance with any Government regulations in force of the time being, and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives.</p>		
		KSHS	
	Section No. 1		
	Bill No. 2		
	GENERAL MATTERS		

ITEM		Amount	
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NO.		Kshs.	
A	<p><b>MATERIALS ARISING FROM EXCAVATIONS</b></p> <p>Materials of any kind obtained from the excavations shall be the property of the Government. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT MANAGER should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.</p>		
B	<p><b>PROTECTION OF THE WORKS</b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.</p>		
C	<p><b>REMOVAL OF RUBBISH ETC</b></p> <p>Removal of rubbish and debris from the Buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.</p>		
D	<p><b>WORKS TO BE DELIVERED UP CLEAN</b></p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metal work and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER.</p>		
E	<p><b>FIRM PRICE CONTRACT</b></p> <p>Unless otherwise specifically stated in the Particular Preliminaries this is a firm price contract and the Contractor must allow in his tender rates any increase in the cost of labour and/or materials during the currency of the contract.</p>		
	<p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		

ITEM NO.		Amount Kshs.	
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A	<p><b>GENERAL SPECIFICATION</b> For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p> <p><b>B TRAINING LEVY</b> The Contractor's attention is drawn to the legal notice which requires payment by the Contractor of a Training Levy at the rate of ¼% of the Contract sum on all contracts of more than Kshs. 1,000,000.00 in value.</p> <p><b>C MATERIALS ON SITE</b> All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p> <p><b>D HOARDING</b> The contractor shall enclose the site or part of the works under construction with a hording 2400mm high consisting of gauge 30 iron sheets on 100 x 50mm cypress timber posts firmly secured at 1800mm centres with two 75 x 50mm timber rails complete with 2No. vehicular gates and 1No. Pedestrian gate. The contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on site.</p> <p><b>E CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b> The Contractor shall constantly keep on the works literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the conditions of Contract.</p> <p><b>F COPYRIGHT</b> The copyright of these documents is vested in <b>Chief Quantity Surveyor, Ministry of Public Works</b>. No part of this document may be reproduced in any form or by any means without their prior permission.</p> <p style="text-align: right;">KSHS</p> <p>Section No. 1 Bill No. 2 GENERAL MATTERS</p>		
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	Section No. 1		
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[illegible]

	<b>SECTION SUMMARY - PRELIMINARIES</b>				
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## TENDER EVALUATION CRITERIA

Evaluation will be done in five stages as follows: -

1. Determination of responsiveness.
2. Technical evaluation.
3. Financial evaluation.
4. Combination of technical and financial evaluation.
5. Recommendation for award.

## 1. STAGE 1. (TENDER RESPONSIVENESS)

- (i) In accordance with the requirement of the instruction to Tenderers under clause 5, only substantially responsive tenders will be subject to detailed evaluation. For purpose of clause 5, a responsive tender is one which conforms to all the terms, conditions and specifications of the tendering documents without material deviation or reservation. The mandatory conditions to be compiled with are:

- a) Certified copy of registration/ incorporation.
- b) Valid certified tax compliance certificate.
- c) Certified copy of registration with NCA 8 and above (Buildings)
- d) Form of tender (properly filled and signed)
- e) Bid security not less than ksh 50,000 (from approved institutions, proper validity period). **BIDDERS MUST SUBMIT ORIGINAL BID BOND TO PROCUREMENT BEFORE CLOSURE OF TENDER. BIDDERS WHO FAIL TO SUBMIT WILL BE DISQUALIFIED**
- f) Litigation history (sworn and signed affidavit to be provided)
- g) Confidential business questionnaire (properly filled and signed)  
Certified copy of CR12 Form and copies of IDs of Directors
- i) Valid Certified single business permit.
- j) Tender document MUST be serialized and must have public works reference number.
- k) Attach certified copy of Audited Accounts for the last TWO Years ( 2018 & 2019)
- l) Attach certified copy of Bank Statement for the last Six Months ending 30TH September 2020
- m) Presentation and Response :- This includes clear scanned documents, neat presentation, separation and arrangement of requested information and general response to all requirements

- (ii) Accompany shall fulfill all the above conditions in order to proceed to the technical evaluation.

- (iii) Any company that does not fulfill any of the above conditions shall be disqualified from further evaluation at this stage.



**2. STAGE 2. (TECHNICAL EVALUATION)**

(i) The technical analysis will be allocated 60 score.

(ii) The tenderer **MUST** show proof of equipment, plant & machinery, Vehicle, similar works etc.

(iii) The criteria for technical analysis will be as follows: -

Item	Criteria			Score	Max score
1	<b>Similar works</b> Ongoing (at least 50% complete) Max.consideration, 3 projects	Below 2 million Ksh		1	6
		Over 2 m ksh		2	
	Complete Project max.3 projects in the last 5 years	Below 2 million ksh		2	9
		Over 2m Ksh		3	
	<b>TOTAL</b>				15
2	<b>Availability of equipment</b>	Pickup	1 number More than 1	2 4	4
		Truck	1 number More than 1	3 5	
		Other relevant	1 number	1	5
			2 number 3 and over	3 5	
	<b>TOTAL</b>				14
3	<b>Qualified personnel in relevant trade i.e construction industry</b>			Per person	3
		Diploma		1	
				3	
		Degree		1	
				2	
a)	Director of the company (any one (1) director.	Diploma		1	2
				2	
				2	
				2	
b)	2no.Key personnel but of different specialty with over 5 years' experience (Qs's,Architects,Str/Civil eng & constr.managers	Degree		1	4
				2	
				2	
				2	
	<b>Financial status KES-Audited</b>	Financial statement of 2017 to 2019		1	1
				1	1

Item	criteria		score	Max score	
4	Financial reports	<u>Financial statement of 2019</u>	1	1	1
		<u>Net yearly operating profit</u>	Profit loss	10	
		Non-current Asset base	0-15m Over15-30m Over 30m-40m Over 40m-50m Over 50	0 1  2 3 4	4    8
5	Evidence of adequacy of working capital (cash at hand & Banks-signed & stamped current bank statement dated not more than a month from the date submission, letters of credit stating amount to be advanced)	<u>Has financial resources</u>			
below the cost of the project		0			
equal the cost of the project		4			
more than 2x the cost of the project		10	10		
				10	
			Total score	60	

(iv). All companies that fail to get a total score of 30 and above (out of 60) will be disqualified from further evaluation and will not proceed to financial evaluation.

### **STAGE 3. (FINANCIAL EVALUATION)**

#### **(I). MATERIAL DEVIATIONS, MARKET PRICES AND CONSISTENCY OF RATES**

The bidder's prices shall be evaluated further by comparing them to the market prices financial evaluation shall be as follows: -

##### **(a) Front loading for main Elements**

The elemental total shall be compared against the market price as per engineer's estimates where the

- (i) Preliminaries
- (ii). Builders
- (iii). Civil works

##### **(b) Market rates for main items.**

The unit rate shall be compared against the market rate as follows: -

- a. Concrete class 25/20
- b. Reinforcement Y25
- c. 200mm thick walling
- d. Formwork per sm
- e. Z purlins
- f. Decra roofing
- g. Aluminum doors
- h. Steel Casement window size 2250x2750
- i. Granito floor tiles
- j. Wall tiles
- k. Plaster 12mm internal
- l. Emulsion paint

##### **(c) Consistency of rates and errors**

The tenderers rates shall be thoroughly evaluated for consistency or lack of consistency. Specific emphasis will be given to work items of similar nature occurring in different elements or bills of the priced bill of quantities. Tenders determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as per clause 5.7

### **STAGE 4. RECOMMENDATION FOR AWARD**

A recommendation will be made to award this tender to the tenderer with the lowest responsive bid at the price indicated on the form of tender.



NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>PROPOSED CONSTRUCTION OF COMPUTER LABORATORY AT BUTULA VTC</u></b>				
	<b><u>ELEMENT NO. 1</u></b>				
	<b><u>SUB-STRUCTURE (ALL PROVISIONAL)</u></b>				
	Note: This element comprises of all works upto and including the surface bed.				
	<b><u>Excavation and Earthworks</u></b>				
A	Clear site of bushes, shrubs and small trees, grab their roots and burn the arisings onsite.	222	sm		
B	Excavate oversite to remove vegetable top soil mean depth 200mm load and spread on site to make up levels.	222	sm		
C	Excavate in normal soil for strip foundation trench starting from stripped level but not exceeding 1.50m deep.	80	cm		
D	Ditto in column pits ditto.	20	cm		
E	Excavate to reduce levels.	53	cm		
E	Extra over excavation for excavating in hard rock irrespective of depths.	20	cm		
F	Return, fill in and ram selected excavated materials around foundations.	61	cm		
G	Load and spread on site surplus excavated materials.	92	cm		
H	Imported approved murram compacted 100mm layers to make up levels below hard core (m.s)	53	cm		
J	300mm Thick approved hardcore hand packed and compacted to project managers approval.	175	sm		
K	50mm Thick murram blinding to top of hardcore (m.s)	175	sm		
L	Treat surface of hardcore and exposed top of foundation walling with an approved anti-termite solution strictly to manufacturers printed instruction.	189	sm		
	<b><i>TOTAL CARRIED TO COLLECTION</i></b>				

NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>CONCRETE WORKS</u></b>				
	<b><u>Plain concrete (1:4:8) in:-</u></b>				
A	50mm Thick blinding under strip foundation.	53	sm		
B	Ditto in piers	13	sm		
	<b><u>Vibrated reinforced concrete (1:2:4) 20/20 aggregate in:-</u></b>				
C	Strip foundation	11	cm		
D	Columns	3	cm		
E	Steps and ramps	1	cm		
F	150mm Thick tempered surface bed	189	sm		
	<b><u>REINFORCEMENT</u></b>				
	<b><u>High tensile square twisted bars to B.S 4461 with and including descaling, cutting to size bending, binding wire and spacer blocks.</u></b>				
G	8mm diameter bars	66	Kg		
H	10mm Diameter bars	181	Kg		
J	12mm Ditto	455	Kg		
K	B.R.C mesh ref. No. A142 with and including (150mm) minimum end and side laps.	189	sm		
	<b><u>Walling:-</u></b>				
L	200mm Thick natural hand dressed walling in cement and sand (1:4) mortar reinforced with and including 20SWGx19mm wide hoop iron in every second alternate course.	151	sm		
	<b><u>Damp Proofing</u></b>				
M	500 Gauge black polythene paper as damp proof membrane with (150mm min) end and side laps.	189	sm		
	<b><i>TOTAL CARRIED TO COLLECTION</i></b>				

CLB/2

NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>Form work</u></b>				
A	Sawn cypress form work to sides of strip foundation.	23	sm		
B	Sides of steps and ramp.	8	sm		
C	Edges of surface bed girth 150-225mm.	60	Lm		
D	Sides of columns	17	sm		
	<b><u>Paving Slabs</u></b>				
E	600x600x50mm Thick pre-cast concrete (1:2:4) slabs laid on and including 50mm consolidated sand, jointed and pointed in cement and sand (1:4) mortar.	36	sm		
	<b><u>Plinth</u></b>				
F	15mm Thick cement and sand (1:4) render to plinth finished with a wood float.	24	sm		
G	Prepare and apply three coats of black bituminous paint to rendered plinth walls externally.	24	sm		
H	Allow for plunking and strutting.	1	Item		
J	Allow for keeping off all types of water from excavation works.	1	Item		
	<b><i>Total Carried to Collection</i></b>				
	<b><u>COLLECTION</u></b>				
	Brought from page CLB/1.....				
	Brought from page CLB/2.....				
	Brought from page above.....				
	<b><i>TOTAL CARRIED TO SUMMARY OF ELEMENTS</i></b>				

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**CLB/4**



NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>ELEMENT NO. 4</u></b>				
	<b><u>ROOF: Construction</u></b>				
	All in well seasoned and treated cypress grade II timber (Pitch angle=22.5 <sup>0</sup> )				
	<u>Trusses 1800mm c/c (11No.trusses)</u>				
A	100x50mm wall plate secured with and including hoop iron at 1200mm (max) centres.	55	Lm		
B	150x50mm Tie beams.	99	Lm		
C	Ditto Rafters	152	Lm		
D	Ditto Kingpost.	29	Lm		
E	100x50mm Ties struts.	163	Lm		
F	Ditto collar ties.	43	Lm		
G	75x50mm Purlins.	253	Lm		
H	150x25mm Cleats.	47	Lm		
J	100x25mm cleats	33	Lm		
K	75x25mm Ditto.	42	Lm		
	<b><u>Wrot Cypress</u></b>				
L	250x25mm Fascia board.	38	Lm		
M	Ditto verge board.	25	Lm		
N	75x25mm Tongued and grooved boarding at eaves treatment with and including 25x25mm hangers and bears at 600mm centres.	30	sm		
	<b><u>Cover</u></b>				
P	Gauge 28 pre-painted IT-4 cover on timber Purlins (m.s)	237	sm		
Q	Ditto matching cover and hip cover.	19	Lm		
	<b>TOTAL CARRIED TO COLLECTION</b>				

NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>RAIN WATER GOODS:</u></b> (All in click fit second grade upvc products.)				
A	150mm Diameter half round gutter with matching brackets.	38	Lm		
B	100mm Diameter rain water down pipe.	14	Lm		
C	Extra over ditto nozzle outlet.	4	No		
D	Ditto 600mm projection swarn neck	4	No		
E	Ditto rain water shoe.	4	No		
F	Extra over 150mm diameter half round 90 <sup>0</sup> internal return bend.	4	NO		
	<i>Total Carried to Collection</i>				
	<b><u>COLLECTION</u></b>				
	Brought from page CLB/6.....				
	Brought from page above.....				
	<b>TOTAL CARRIED TO SUMMARY OF ELEMENTS</b>				





NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>DOORS</u></b>				
	<b><u>Steel Doors</u></b>				
A	Purpose made double door overall size 1500x2400 high in two un-equal openable parts complete with all necessary accessories and fan light primed once in red-oxide	2	No		
B	Ditto but burglar proof grilled door overall size 1500x2400mm high with 30x30x3mm thick frame,top and bottom stiles,intermediates at 150mm c/c to approval.	2	No		
	<b><u>Flush Doors</u></b>				
C	45mm thick solid core flush door (double veneered) overall size 900x2400mm high with and including overhead fanlight to approval.	2	No		
	<b><u>Frames and fittings</u></b>				
D	95x45mm thick once rebated door frame	12	Lm		
E	45x25mm architrave ditto.	12	Lm		
F	20mm quadrant	12	Lm		
G	20x15mm thick timber beadings.	3	lm		
	<b><u>Glazing</u></b>				
H	4mm thick clear glass size 875x250mm	2	No		
	<b><u>Iron mongery</u></b>				
J	Supply and fix 2 Lever "Union" mortice lock	2	No		
K	Ditto 100mm long mild steel door cramps	6	No		
L	Ditto Brass butt hinges	3	Prs		
	<b>TOTAL CARRIED T SUMMARY OF ELEMENTS</b>				

NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>ELEMENT NO. 7</u></b>				
	<b><u>FINISHES</u></b>				
	<b><u>Wall finishes</u></b>				
A	15mm thick gauged plaster (1:1:6) to walls internally.	246	sm		
B	15mm thick cement and sand (1:3) render to walls externally	161	sm		
	<u>Painting and decorations</u>				
	<u>Prepare and apply three coats of first quality plastic emulsion paint to: -</u>				
C	Plastered,rendered walls and beams	407	sm		
	<u>Floor finishes (Office and store).</u>				
D	24mm thick cement and sand (1:4) screed trowelled hard and rough to receive ceramic floor tiles (m.s).	175	sm		
E	300x300x6mm thick ceramic floor tiles,pointed and jointed in cement grout.	175	sm		
F	6x100mm matched floor skirting ditto.	90	Lm		
	<b><u>Knot,prime,prepare and apply two coats of gloss oil paint to surfaces of:-</u></b>				
G	Doors externally.	14	sm		
H	Ditto internally.	14	sm		
J	Windows externally.	17	sm		
K	Ditto internally.	17	sm		
L	Ditto but to timber boardings 150-300mm girth	63	Lm		
	<b><i>TOTAL CARRIED T SUMMARY OF ELEMENTS</i></b>				

NO.	DESCRIPTION	QTY	UNIT	RATE	KSHS.
	<b><u>Ceiling</u></b>				
A	9mm Thick plain chipboard ceiling lining on timber brandering (s.m).	175	sm		
B	Extra over ditto in trap door overall size 800x800mm complete with frame and hinges.	1	No		
C	75x75mm covetto cornice plugged.	90	Lm		
	<b><u>Branderling</u></b>				
D	75x50mm cypress timber cut in flush between tie beams (m.s)	268	Lm		
E	50x50mm Ditto plugged.	43	Lm		
F	Prepare and apply one undercoat and two coats of finishing coats of distemper washable paint to soffites of ceiling lining.	30	sm		
	Total Carried to collection				
	<b><u>COLLECTION</u></b>				
	Total brought forward from page CLB/10				
	Brought from above				
	<b><i>TOTAL CARRIED TO SUMMARY</i></b>				

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**CLB/12**

**SPECIFICATIONS  
OF  
ELECTRICAL MATERIALS AND WORKS**

## **PARTICULAR SPECIFICATIONS**

### **1.1 Extent of the works**

- The works to be carried out include the supply, delivery, installation, testing, commissioning and leaving in servicing condition the complete installation as herein described in the Bills of Quantities and general specification. The works shall include, but not limited to the supply and installation of the following: -
- Lighting fitting
- Power points
- Provision of outlets points for Telephone

### **1.1 Regulation and standard**

The works shall comply with the provisions of the following as necessary and relevant:

- Electric Power Act
- Kenya Bureau of Standards (KBS)
- Institution of Electrical Engineers (I.E.E) Wiring Regulations Current recommendation of CCITT and CCIR

### **1.2 Electrical Requirements**

The equipment to be supplied shall be capable of being operated from 240V AC 50HZ power supply.

## GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

- 2.1 General
- 2.2 Standard of materials
- 2.3 Workmanship
- 2.4 Procurement of materials
- 2.5 Shop Drawings
- 2.6 Record Drawings
- 2.7 Regulation and standards
- 2.8 Setting out works
- 2.9 Position of Electrical plant and Apparatus
- 2.10 M.C.B Distribution panels and consumer units
- 2.11 Fused switchgear and isolators
- 2.12 Conduits and conduit Runs
- 2.13 Conduit Boxes and Accessories
- 2.14 Labels
- 2.15 Ear thing
- 2.16 Cables and Flexible Cords
- 2.17 Armored PVC Insulated and sheathed Cables
- 2.18 Cable supports; Makers and Tiles
- 2.19 PVC Insulated cables
- 2.20 Heat Resisting Cables
- 2.21 Flexible Cord
- 2.22 Cable Ends and phase Colors
- 2.23 Cable Insulation Colors
- 2.24 Sub-circuit wiring
- 2.25 Space Factor
- 2.26 Insulation
- 2.27 Lighting switches
- 2.28 Sockets and switched sockets
- 2.29 Fused spur Boxes
- 2.30 Cooker outlets
- 2.31 Connectors
- 2.32 Lamp holders
- 2.33 Testing on site
- 2.34 Appendix to general specifications of materials and works.
- 3.0 Measured works
- 3.1 Grand summary
- 3.2 Pre-contract conditions

## **2.1 GENERAL**

This specification is to be read in conjunction with the drawings which are issued with it. Bills of Quantities shall be basis of all additions and omissions during the progress of the works.

## **2.2 STANDARD OF MATERIALS**

Where the materials and equipment are specifically described and named in the specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the sub – contractor shall adhere.

Should the sub – contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the sub-contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the sub-contractor. All materials required for the works shall be new and the best of the respective kind and shall be of a uniform pattern.

## **2.3 WORKMANSHIP**

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the sub-contractors' expense.

Permits, certificates or licenses must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licenses exist under Government legislation.

## **2.4 PROCUREMENT OF MATERIALS**



The sub-contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Sub – contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required.

## **2.5 SHOP DRAWINGS**

Before manufacture or fabrication is commenced the sub-contractor shall submit two copies of detailed drawings of all control pillars, meter cubicles, medium voltage switchboards including their components showing all pertinent information including sizes, capacities, construction details, etc. as maybe required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the sub-contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

## **2.6 RECORD DRAWINGS**

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and sections.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One colored set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

## **2.7 REGULATIONS AND STANDARDS**

All work executed by the sub-contractor shall comply with the current edition of the “Regulations” for the Electrical Equipment of Buildings, issued by the institution of Electrical Engineers, and with the Regulations of the Local Electricity Authority.

Where the two sets of regulations appear to conflict, they shall be clarified with the Engineers. All materials used shall comply with relevant Kenya Bureau of Standards Specification.

## **2.8 SETTING OUT WORK**

The sub- contractor at his own expenses; is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details

As may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his tender for all such modifications and for the provision of any such sketches or drawings related thereto.

## **2.9 POSITIONS OF ELECTRICAL PLANT AND APPARATUS**

The routes of cables and approximate positions of switchboards etc. as shown on the drawings shall be assumed to be correct for purpose of Tendering, but exact positions of all electrical Equipment and routes of the cables must be agreed on site with the Engineer before any work is carried out.

### **2.10 MCB DISTRIBUTION PANELS AND CONSUMER UNITS**

All cases of MCB panels and consumer units shall be constructed in heavy gauge sheet with hinged covers. Removable undrilled gland plates shall be provided on the top and bottom of the cases. Miniature circuit breakers shall be enclosed in molded plastic with the tripping mechanism and arc chambers separated and sealed from the cable terminals.

The operating dolly shall be trip free with appositive movement in both make and break position. Clear indication of the position of the handle shall be incorporated.

The tripping mechanism shall be on inverse characteristic to prevent tripping in temporary overloads and shall not be affected by normal variation in ambient temperature.

A locking plate shall be provided for each size of breaker; A complete list of circuit details on typed cartridge paper glued to stiff cardboards and covered with a sheet of Perspex, and held in position with four suitable fixings, shall be fitted to the inner face of the lids of each distribution panel. The appropriate MCB ratings shall be stated on the circuit chart against each circuit in use: Ivories labels shall be secured to the insulation barriers in such a manner as to indicate the number of circuits shown on the circuit chart. Insulated barriers shall be fitted between phases, and neutrals in all boards, and to shroud live parts.

Neutral cables shall be connected to the neutral bar in the same sequence as the phase cables are connected to the MCB'S. This shall also apply to the bars when installed.

## **2.9 POSITIONS OF ELECTRICAL PLANT AND APPARATUS**

The routes of cables and approximate position of switchboards etc. as shown on the drawings shall be assumed to be correct for purpose of tendering, but exact positions of all electrical Equipment and routs of cables must be agreed on site with the engineer before any work is carried out.

### **2.10 MCB DDISTRIBUTION PANELS AND CONSUMER UNITS**

All cases of MCB Panels and consumer units shall be constructed in heavy gauge sheet with hinged covers.

Removable undrilled gland plates shall be provided on the top and bottom of the cases.

Miniature circuit breakers shall be enclosed in molded plastic with the tripping mechanism and arc chambers separated and sealed from the cable terminals.

The operating dolly shall be trip free with a position movement in both make and break position.

Clear indicates of the position of the handle shall be incorporated.

The tripping mechanism shall be on inverse characteristics to prevent tripping in temporary overloads and shall not be affected by normal variation in ambient temperature.

A locking plate shall be provided for each size of breaker; a complete list of circuit details on typed cartridge paper glued to stiff cardboards and covered with a sheet of Perspex, and held in position with four suitable fixings, shall be fitted to the inner face of the lids of each distribution panel. The appropriate MCB ratings shall be stated on circuit chart against each circulation use: Ivoring labels shall be secured to the insulation barriers in such a manner as to indicate the number of circuits shown on the circuit chart.

Insulated barriers shall be fitted between faces and neutrals in all boards and shroud live parts.

Neutral cables shall be connected to the neutral bar in the same sequence as the face cables are connected to the MCB's. This shall apply to earth bars when installed.

## **2.11 FUSED SWITCHGEAR AND ISOLATORS**

All fused switchgears and isolators whether mounted on machinery, walls or industrials panels shall conform to the requirements of 04-226 PART: 1:1985.

All contacts are to be fully shrouded and are to have a breaking capacity on manual operations as required by KS 04-182: 1980.

Fuse links for fused switches are to be of high rupturing capacity cartridge type, conforming to KS 04 – 183: 1987.

Isolators shall be load breaking/fault making isolators.

Fused switches and isolators are to have separate metal enclosures.

Mechanical interlocks are to be provided between the door and main switch operating mechanism so arranged that the door may not be opened with the switch in the "ON" position.

Similarly; it shall not be possible to close the switch with the door open except that provision to defeat the mechanical interlock and close the switch with the door in the open position for test purposes.

The "ON" and "OFF" positions of all switches and isolator shall be by mechanical flag indicator or similar device. In T.PG&N fused switch units, bolted neutral links are to be fitted.

## **2.12 CONDUITS AND CONDUIT RUNS**

Conduit systems are to be installed so as to allow the loop-in system of wiring:

All conduits shall be black rigid super high impact heavy gauge class 'A' PVC in accordance with KS04-179:988 and IEE Regulation. No conduits less than 20mm in diameter shall be used anywhere in this installation.

Conduit shall be installed buried in plaster work and floor screed except when run on wooden or metal surface when they will be installed surface supported with saddles every 600mm.

Conduit run in chases shall be firmly held in position by means of substantial pipe hooks driven into wooden plugs.

The Sub- Contractor/Main-Contractor's attention is drawn to the necessity of keeping all conduits entirely separate from other piping services such as water and no circuit connections will be permitted between conduits and such pipes all conduit systems shall be arranged wherever possible to be self-draining to switch boxes and conduit outlet points for fittings:

The systems, when installed and before wiring shall be kept plugged with well-fitting plugs and when short conduit pieces are used as plugs, they shall be doubled over and tied firmly together with steel wire; before wiring all conduit systems shall be carried out until the particular section of the conduit installation is completed in every respect.

The sets and bends in conduit runs are to be formed on site using appropriate size bending springs and all radii of bends must not be less than 2.5 times the outside diameter of the conduit. No solid or inspection bends tees or elbows will be used.

Conduit connections shall either be by a demountable (screwed up) assembly or adhesive fixed and water tight by solution. The tube and fittings must be clean and free of all grease before applying the adhesive. When connections are made between the conduit and switch boxes, Circular and non-screwed boxes, care shall be taken that no rough edges of conduit stick out into boxes.

Run between draw in boxes are not to have more than two right angle bends or their Equivalent. The Sub-Contractor/Main-Contractor may be required to demonstrate to the Engineers that wiring in any particular run is easily withdrawable and She/he may at no extra Cost to the contract; be required to install additional draw-in boxes required. If a conduit is installed in straight runs in excess of 6000mm; expansion coupling as manufactured by E.g. a tube shall be used at intervals of 600mm.

Where conduit runs are to be concealed in pillars and beams, the approval of the structural Engineer, shall be obtained. The Sub-Contractor/Main Contractor shall be responsible for marking the accurate position of all holes, chases etc., on site or if the Engineer so directs, shall provide the Main Contractor with dimensional drawings to enable him to mark out and form all Holes chases. Should the sub – Contractor fail to inform the Main contractor of any inaccuracies in this respect they shall be rectified at the sub-contractor's expenses.

It will be the sub –contractor's responsibility to ascertain from site, details of reinforced Concrete or structural steelwork and check from the builder's drawings the positions of walls, Structural concrete

and finishes. No reinforced concrete or structural steelwork may be drilled without First obtaining the written permission of the structural Engineer.

The drawings provided with these specifications indicate the appropriate position s only of points and switches and it shall be the Sub-Contractors responsibility to mark out and Centre on Site the accurate positions where necessary in consultation with the Architect and Engineer.

The sub-contractor alone shall be responsible for the accuracy of the final position.

### **2.13 CONDUIT BOXES AND ACCESSORIES**

All conduit outlets and junction boxes are to be either malleable iron and of standard circular Pattern of the appropriate type to suit saddles being used or super high impact PVC Manufactured to KS04-179:1983.

Small circular pattern boxes are to be used with conduits up to and including 25mm outside diameter. Rectangular pattern adaptable boxes are to be used for conduit of 32mm outside diameter and larger. For drawing in of cables in exposed runs of conduit, standard pattern through boxes are to be used:

Boxes are to be not less than 50mm deep and of such dimensions as will enable the largest appropriate number of cables for the conduit sizes to be drawn in without excessive Bending.

Outlet boxes for lighting fittings are to be of the loop-in type where conduit installation is Concealed and the sub-contractor shall allow one such box per fitting, except where fluorescent Fittings are specified when two such boxes per fitting shall be fitted flush with ceiling and if Necessary fitted with break joint rings. Pattresses shall be fitted where required to outlets on Surface conduit runs.

Adaptable boxes are to be of PVC or mild steel [of not less than 12swg] and black enameled or galvanized finish according to location. They shall be of square or oblong shape location. They Shall be of square or oblong shape complete with lids secured by four 2BA brass roundhead screws No adaptable box shall be less than 75mm\*75mm\*50mm or larger than 300mm\*300mm\*75mm and shall be adequate in depth in relation to the size of conduit Entering it. Conduits shall only enter boxes by means of conduit bushes.

### **2.14 LABELS**

Labels fitted to switches and fuse boards;

- (i) Shall be Ivorys engraved black on white.
- (ii) Shall be secured by R.H brass screws of same manufacturing throughout.
- (iii) Shall be indicated on switches:
  - (a) Reference number of switch
  - (b) Special current rating
  - (c) Item of equipment controlled
- (iv) Shall indicate on MCB panel
  - a) Reference number
  - b) Type of board, i.e., lighting, sockets, etc.

- c) Size of cable supplying panel
- d) Where to isolate feeder cable
- (iv) Shall be generally not less than 75mm\*50mm

## **2.15 EARTHING**

The ear thing of the installation shall comply with the following requirement;

- (i) It shall be carried out in accordance with the appropriate sections of the current Edition of the regulations, for the Electrical Equipment of Building issued by Institute of Electrical Engineer of Great Britain.
- (ii) At all Main distribution panels and Main service positions a 25mm\*3mm Minimum cross sectional area of copper tape shall be provided and all Equipment including the lead sheath and armoring of cables, distribution Boards and metal frame shall be bonded thereto.
- (iii) The earth tape in sub-clause[ii]shall be connected by means of a copper tape or Cable of suitable cross sectional area to an earth electrode which shall be a Copper earth rod [see later sub-clause]
- (iv) All tapes to be soft high conductivity copper, untinned except where otherwise Specified and where run underground on or through walls, floors etc. shall be Served with corrosion resisting tape or coated with corrosion compound and Braided.
- (v) Where the earth electrode is located outside the building a removable test link Shall be provided inside the building as near as possible to the point of entry to The tape, for isolating the earth electrode for testing purposes. Ear thing of sub-main equipment shall be deemed to be satisfactory where the sub Main cables are M.I.C.S or conduit with separate earth wire, and installation is carried out in accordance with the figures stated in the current edition of the I.E.E Regulations.
- (vi) Where an earth rod is specified [see sub –clause (iii) it shall be proprietary manufacture, Solid hard drawn copper of 15mm diameter driver into the ground to a minimum depth of 3.6m. It shall be made up to 1.2m sections with interval Screw and socket joints and fitted with hardened steel tip and driving cap.
- (vii) Earth plates will not be permitted. Where an earth rod is used the earth resistance shall be tested in the manner Described in the current edition of the IEE Regulations, the sub-contractor/main- Contractor shall be responsible for the supply of all TEST EQUIPMENTS.
- (viii) Where copper tape is fixed to the building structure it shall be by means of purpose made non-ferrous saddles which spaces the conductor away from the Structure a minimum distance of 20mm. fixings shall be made using purpose Made plugs; No fixing requiring holes to be drilled through the tape will be accepted.
- (ix) Joints in copper tape shall be tinned before assembly riveted with a Minimum of two copper rivets and seated solid.
- (x) Where holes are drilled in the earth tape for connections to items of Equipment the effective cross-sectional area must not be less than required to Comply with these regulations
- (xi) Bolts, nuts and washers for any fixing to the earth tape must be of non-ferrous Material.

- (xii) Attention is drawn to the need for the earthing metal parts of lighting fittings and for bonding ball joint suspension in lighting fittings.

## **2.16 CABLES AND FLEXIBLE CORDS**

All cables used in this sub-contract /contract shall be manufactured in accordance with the current appropriate Kenya standard specifications which are as follows: -

- |   |               |
|---|---------------|
| - PVC insulated cables and flexible cords | KS04-192:1988 |
| - PVC insulated armored cables            | KS04-194:1990 |
| - Armoring of electric cables             | KS04-290:1987 |

The successful Sub-Contractor/Main-Contractor will, at the Engineers discretion be Required to submit sample of cables for the Engineers reserves the right to call for The cables of an alternative manufacture without any extra cost being incurred.

P.V.C insulated cables shall be 500/1000v grade. No cables smaller than 1.5mm<sup>2</sup> shall be used unless otherwise specified. The installation and the finish of cables shall be as detailed in later clauses. The color of cables shall conform with the details stated in the "Cable Braid and insulation colours" clause.

## **2.17 ARMoured P.V.C INSULATED AND SHEATHED CABLES:**

Shall be 600/1000v grade manufactured to KS 04-194:1988 and KS 04-187/188 with copper stranded conductors The wire armor Of the cable shall be used wholly as an earth continuity conductor And the resistance of the wire armor shall have a resistance not more than twice of The largest current carrying conductor of the cable P.V.C/S.W.A/P.V.C cables shall be terminated using "Telecom" "B" type or approved Equal or approved equal glands and a P.V.C tapered sleeve shall be provided to Shroud each gland.

Where cables rise from floor level to switchgear etc. they shall be protected by P.V.C Conduit, to a height of 600mm from finished floor level whether the cables are run on the surface or recessed into the wall.

## **2.18 CABLE SUPPORTS, MARKERS AND TILES**

All PVC/SWA/PVC cables run inside the building shall be fixed by studs and back nuts to their channel Sections.

Alternatively, fixing shall be by BICC law type cleating system with die-cast cleats and galvanized mild steel back straps or similar approved equal method. For one or Two cables run together the cleats shall be fixed a special channel section supports or back straps described above which shall in turn be secured to walls or ceilings' of dusts by raw bolts.

In excessively damp or corrosive atmosphere condition special finishes may be and the sub – contractor/ main contractor shall apply to the engineer for further instructions before ordering cleats and channels for such areas.

The above type of hooks and clamps and channels or cleats and black straps shall Also be used for securing cables in vertical ducts.

Cables supports shall be fixed at 600mm maximum intervals, the supports being Supplied and erected under this sub-contract. Saddles shall not be used for Supporting cables nor any other type of fixing other than one of the two method Described above or other system which has received prior approval of the Engineer; Cables are to be kept clear of all pipe work and the sub-contractor/M.C. shall work in close liaison With other services sub-contractors.

The Sub-Contractor/M.C shall include for the pro vision of fixing of approved type Colored slip on cable send markers to indicate permanently the correct phase and Neutral colors on all ends.

Provision shall be made for supplying and fixing approved non-corrosive metal cable Markers to be attached to the outside of all PVC/SWA /PVC Cables at 15mm intervals indicating cable size and distinction.

Where PVC/SWA/PVC cables are outside the building they shall be laid underground 750mm deep with protecting concrete interlocking cover tiles over which shall be provided and laid under the sub-contractor ./contract.

All necessary excavation and reinstatement of ground including sanding or trenches will be carried out by the sub-contractor /M.C, unless otherwise stated.

## **2.19 PVC INSULATED CABLES**

Shall be of non-braided type as MCA reference 6491\*600/1000/1000 volt grade cables, or equal approved.

PVC cables shall conform to the details of the “Cables and flexible cords ” and “cables Braid and insulation colors ”causes.

## **2.20 HEAT RESISTING CABLES**

Final connections to cookers, water heaters, etc., shall be made using butyl rubber insulated cables as CMA reference 610 butyl (Single core 600/1000 volt).

This type of cables shall be used in all instances where a temperature exceeding 100 degrees F but not exceeding 150 degrees F is likely to be experienced .Final connections to all lighting fittings (and other equipment where a temperature in excess of 150 degrees, likely to be experienced) shall be made using Silicon rubber insulated cable or equal and approved.



## **2.21 FLEXIBLE CORDS**

Shall be in accordance with the “cable and flexible cord” clause. No cord shall be Less than 24/0.2mm in size unless otherwise specified.

Circular white twins TRS flex shall be used for plain pendant fittings up to 100 watts.

For all other types of lighting fittings the flexible cable shall be silicone rubber Insulated.

No polythene insulated flexible cable shall be used in any lighting fitting or other Appliance (see “Heat Resisting Cable “Clause 30).

## **2.22 CABLE ENDS AND PHASE COLOURS**

All cable ends connected up in switchgear, MCB panels etc., shall have the insulation Carefully cut back and the ends sealed with Heller man rubber slip on cable end markers.

## **2.23 CABLE INSULATION COLOURS**

Unless otherwise stated in later clause the insulation colors shall be in accordance With the following table.

Where other systems are installed the cable colors shall be in accordance with the Details stated in the appropriate clause.

<b>SYSTEM</b>	<b>INSULATION COLOUR</b>	<b>CABLE END MARKER</b>
---------------	--------------------------	-------------------------

Main and sub-main

- |                 |            |       |
|-----------------|------------|-------|
| a) Phase.....   | Red.....   | Red   |
| b) Neutral..... | Black..... | Black |

Sub-circuit single phase

- |                 |            |       |
|-----------------|------------|-------|
| a) Phase.....   | Red.....   | Red   |
| b) Neutral..... | Black..... | Black |

## **2.24 SUB-CIRCUIT WIRING**

For all lighting and sockets wiring shall be carried out in the “looping in” system and there shall be no joints whatsoever. No lighting circuits shall comprise more than 20 points when protected by 10A MCB. Cables with different cross section area of copper shall not be used in combination.

Lighting circuits P.V.C cable 1.5mm<sup>2</sup> for all lighting circuits indicated on the drawing.

Power circuits P.V.C cable (minimum sizes).

- (i) 2.5mm<sup>2</sup> for one, two or three 5Amp sockets wired in parallel.
- (ii) 2.5mm<sup>2</sup> for one 15Amp socket.
- (iii) 2.5mm<sup>2</sup> for maximum often switched 13Amp sockets wired from 30 Amp MCB.

The wiring sizes for lighting circuits and sockets are shown on the drawings. In such cases, the sizes shown on the drawings shall prevail over the sizes specified.

Wiring sizes for other appliances shall be shown on the drawing or specified in later clauses of these specifications.

## **2.25 SPACE FACTOR**

The maximum number of cables that may be accommodated in a given size of conduit or trunking or duct is not to exceed the number in Tables B.5 and B.6 or as stated in Regulation B.91, B.117 and B.118 of the I.E.E Regulations whichever is appropriate.

## **2.26 INSULATION**

The insulation resistance to earth and between poles of the whole wiring system, fittings and lamps, shall not be less than the requirements of the latest edition of the I.E.E regulations. Complete tests shall be made on all circuits by the Sub-contractor/M.C. before the installations are handed over.

A report of all tests shall be furnished by the Sub-Contractor/M.C. to the Engineer. The Engineer will then check test with his own instruments if necessary.

## **2.27 LIGHTING SWITCHES**

These shall be mounted flush with the walls, shall be contained in steel or alloys boxes and shall be of the gangs ratings and types shown in the drawings they shall be as manufactured by M.K Electrical Ltd or other equal and approved to KS 04-247: 1988

## **2.28 SOCKETS AND SWITCHED SOCKETS**

These shall be flush pattern in steel/pic box and shall be of the gangs and types specified in the drawings.

They shall be 13-Amps, 3-pin, shuttered, switched and as manufactured by "M.K. Electrical Co. Ltd", or other approval equal to KS 04-246: 1987

## **2.29 FUSED SPUR BOXES**

These shall be flush, D.P. switched as in steel/PVC box and of type and make specified in the drawings complete with pilot light and as manufactured by “M.K. Electrical Company Ltd”, or other approved equal. KS 04-247:1988

**2.30 COOKER OUTLET**

These shall flush have mounted with 13-A switched socket outlet and neon indicator lamps. The cooker control units shall be as manufactured by M.K. Electrical Company Ltd”, or other approved equal KS 04-247:1988

**2.31 CONNECTORS**

Shall be specified in the drawings and approved rating. These shall be fitted at all conduit box lighting point outlets for jointing of looped P.V.C. cables with flexible cables of specified quality.

**2.32 LAMPHOLDERS**

Shall be of extra heavy H.O skirt and shall be provided for every specified lighting fitting and shall be B.C., E.S. or G.E.S. as required. All E.S. and G.E.S. holders shall be heavy brass type (except for plain pendants where the reinforced Bakelite type shall be used). These screwed cap of the E.S and G.E.S. holders shall be connected to neutral. Where lamp holders are supported by flexible cable, the holders shall have “cord grip” arrangements and in the case of metal shades earthing screws shall be provided on each of the holders. The sub-contractor must order the appropriate type of holder when ordering lighting fittings, to ensure that the correct types of holders are provided irrespective of the type normally supplied by the manufacturers.

These shall be flush, D.P. switched as in steel/pic box and of type and make specified in the drawings complete with pilot light and as manufactured by “M.K. Electrical Company Ltd”, or other approved equal. KS 04-247:1988

**2.30 COOKER OUTLET**

These shall flush have mounted with 13-A switched socket outlet and neon indicator lamps. The cooker control units shall be as manufactured by M.K. Electrical Company Ltd”, or other approved equal KS 04-247:1988

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### **2.33 TESTING ON SITE**

The sub-contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.E of Great Britain, the Government Electrical Specification and Electrical Supply Company's By-Laws.

- (a)** Tests shall be carried out to prove that all single pole switches are installed in the ‘live’ conductor.
- (b)** Tests shall be carried out to prove that all socket outlets and switched socket outlet are connected to the ‘live’ conductor in the terminal marked as such, and that each earth pin is effectively bonded to the earth continuity system. Tests shall be carried out to verify the continuity of all conductors of each ‘ring’ circuit.
- (c)** Phase tests shall be carried out on completion of the installation to ensure that correct phase sequence is maintained throughout the installation. Triplicate copies of the result of the above tests shall be provided within 14 days of the witnessed tests and the sub-contractor will be required to issue to the service engineer the requisite certificate upon completion as required by the regulation referred to above.
- (d)** Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation made apparently by such inspections or tests shall be rectified by the sub-contractor at his own expense.
- (e)** The sub-contractor shall provide accurate instruments and apparatus and all labour required to carry out the above tests. The instruments and apparatus shall be made available to the services engineer to enable him to carry out such tests as he may require.

The sub-contractor shall generally attend on other contractors employed on the project and carry out such electrical tests as may be necessary.

The sub-contractor shall test to the service engineer's approval and as specified elsewhere in this specification or in standard and regulations already referred to, connecting to any power or other supply and setting to work.

Where such equipment, etc., forms part of or is connected to system whether primarily or of an electrical nature or otherwise (e.g. air conditioning system) the sub-contractor shall attend on and assist in balancing, regulating, testing and commissioning, or if primarily an electrical or other system forming part of works, shall balance, regulate, test and commission the system to the service engineer's approval.

## **2.34 APPENDIX TO GENERAL SPECIFICATIONS OF MATERIALS AND WORKS**

The electrical sub-contractor shall comply with the following:-

1. Government Electrical Specification No. 1 and No. 2.
2. All requirements of Kenya Power and Lightning Company Limited, and Communications Commission of Kenya (CCK).



## 3.0 MEASURED WORKS

PROPOSED ELECTRICAL INSTALLATION OF COMPUTER LAB TO BUSIA COUNTY					
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	<b>SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING WORK:</b> a) LIGHTING POINTS COMPRISING 1.5 SQ MM PVC S.C COPPER CABLES, 20MM DIA PVC H.G CONDUITS C/W ALL ACCESSORIES FLUSH IN WALLS EXCLUDING SWITCHES AND ELECTRICAL LUMINAIRES ON ONE WAY SWITCHING.	17	NO		

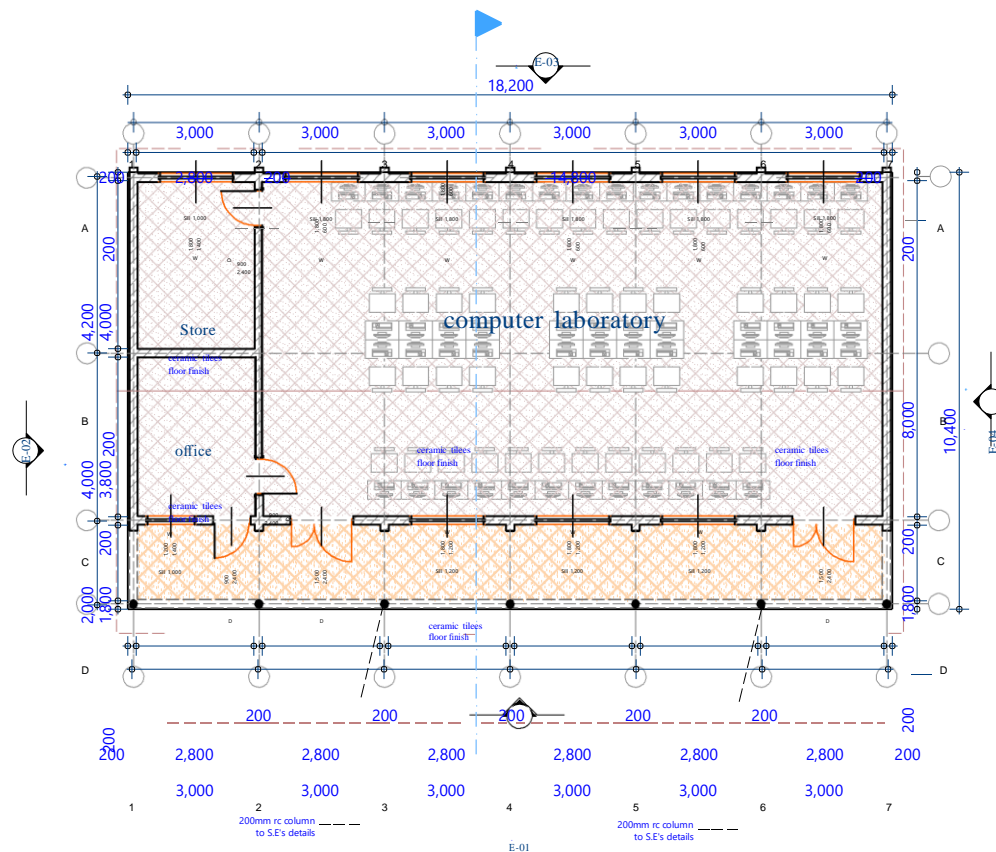
	b) TWO WAY SWITCHING ARRANGEMENTS.	1	NO		
2	POWER POINTS COMPRISING 2.5 SQ MM PVC S.C COPPER CABLES, 20MM DIA PVC H.G CONDUIT C/W ALL ACCESSORIES FLUSH IN WALL.	13	NO		
3	13A TWIN SWITCHED SOCKET OUTLETS AS MK OR EQUIVALENT.	13	NO		
4	13A SINGLE SWITCHED SOCKET OUTLETS AS MK OR EQUIVALENT.	1	NO		
5	5A 1 GANG 2 WAY SWITCHES AS MK, CRABTREE OR EQUIVALENT.	5	NO		
6	6.0 SQ MM S.C CABLE (RED, BLACK & GREEN) FOR SUBMAIN SUPPLY E.A CABLES OR EQUIVALENT.	25	LM		
7	100W RECTAGULAR BULKHEAD FITTING C/W ALL ACCSSORIES AND ANERGY SAVER LAMP AS THORN OR EQUIVALENT.	4	NO		
8	1200MM FLUORESCENT FITTING SINGLE BATTEN AS THORN C/W TUBE AND ALL ACCESSORIES.	11	NO		
9	600MM FLUORESCENT FITTING SINGLE BATTEN AS THORN C/W TUBE AND ALL ACCESSORIES.	0	NO		
10	100A X 4 WAY CONSUMER UNIT AS MEM OR EQUIVALENT C/W 100A INTEGRAL ISOLATOR AND ALL REQUIRED MCBS.	1	NO		
11	3 PLATE CEILING ROSE C/W FLEXIBLE CORD AND BC LAMP HOLDER AND ENERGY SAVER LAMP AS THORN OR EQUIVALENT.	0	LM		
12	LOCKABLE STANDARD CABLE LOOPING 16 GAUGE BOX C/W CUT-OUT COMPLETE WITH SP 80A HRC FUSES.	2	NO		
13	10SQ MM 3-CORE PVC/SWA/PVC UNDERGROUND CABLE.	80	LM		
	<b>TOTAL</b>				
	<b>ELEC - 01</b>				



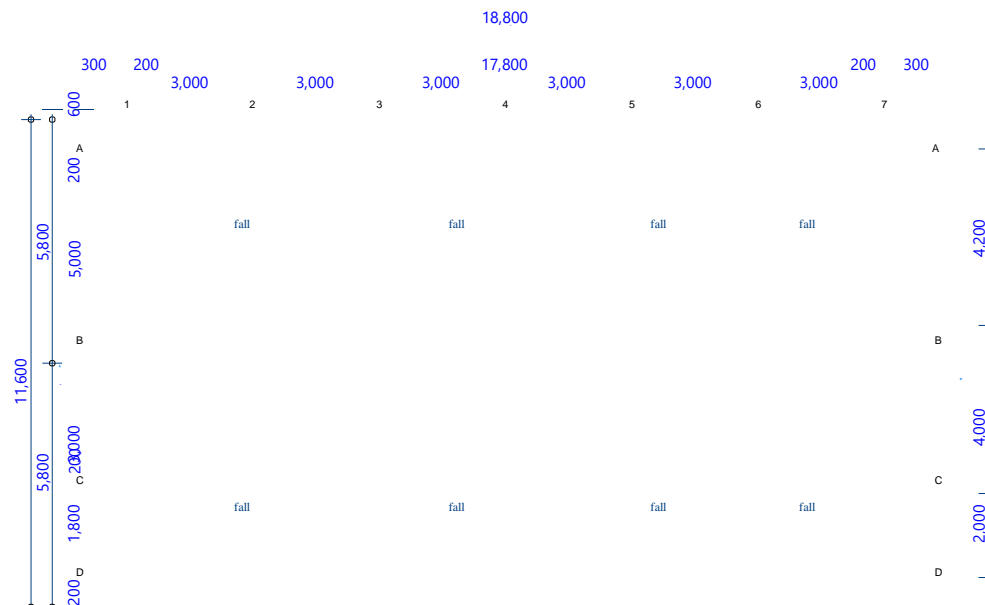


GRAND SUMMARY					
ITEM	DESCRIPTION	TENDER'S USE		OFFICIAL USE	
		SHS	CTS	SHS	CTS
1	Preliminaries.....				
2	Builder's Works.....CLB/12				
3	Electrical works.....				
4	Prime-cost & Provisional sums PS/1.....				
<b>TOTAL CARRIED TO FORM OF TENDER</b>					
<b>Prices inclusive of all taxes</b> Amount in Words:Kenya shillings  BIDDER'S NAME ADDRESS  SIGNATURE:.....  DATE:.....					

GS/1



FLOOR PLAN



## notes

1. All dimensions are in millimetres and are to be read not scaled.
2. All structural works to Structural Engineers

details and approved.

3. Note that this is not a working drawing but

scheme design for documentation purpose. The contractor is advised to get working drawings from the county Architect before the site handover.

8 This drawing is Copyright and should never be reproduced anywhere without the authority of the Architect.

## project title

Proposed construction of computer laboratory at butula vtc in butula sub-county

drawing title:

floor plan, roof plan s

client: DEPARTMENT OF EDUCATION  
BUSIA COUNTY

drawing no. PD/ED/82520-001-2

scale : 1:200

Date Aug 25<sup>th</sup>, 2020

designed

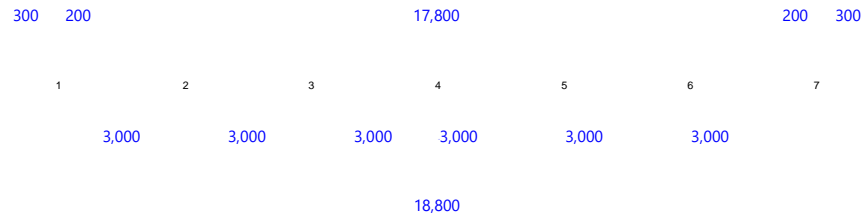
NYANGWESO

checked

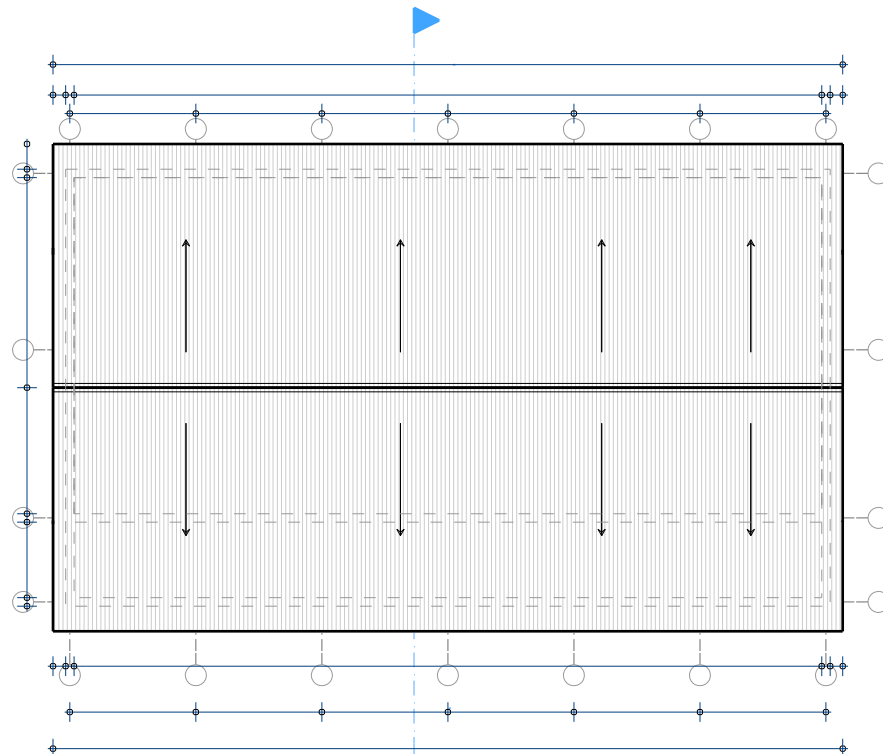
drawn

NYANGWESO

MINISTRY OF  
TRANSPORT



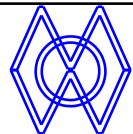
ROOF PLAN

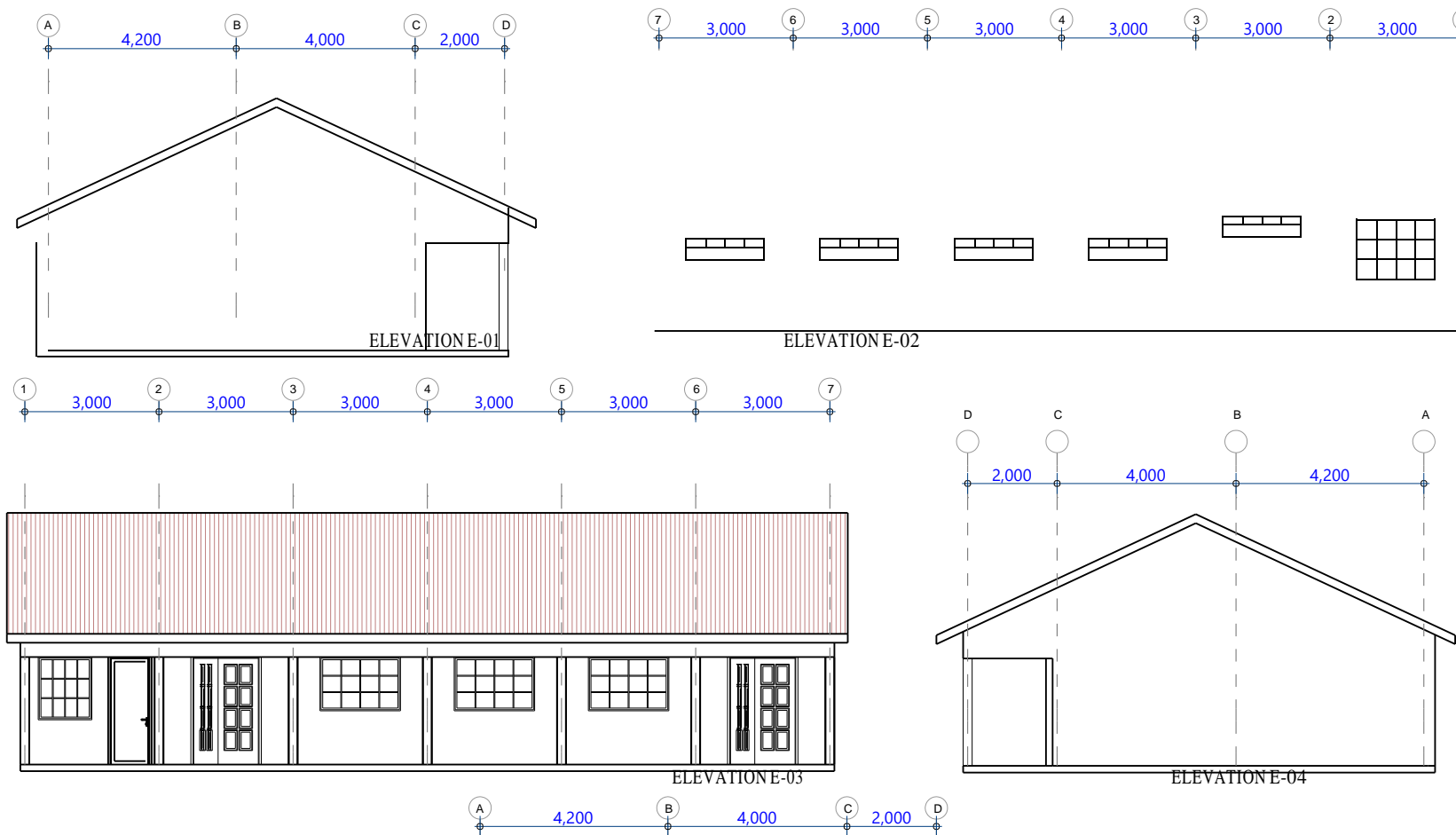


notes

PUBLIC WORKS  
BUSIA COUNTY  
ARCHITECTURAL DEPARTMENT

FOR THE GOVERNMENT OF REPUBLIC OF KENYA





28Gauge Box Profile Sheets on 75x50mm  
cyprus Timber Purlin on 100x50mm thick timber  
Trusses @30 degrees Roof Pitch.

ex200 X 25  
Fascia Board

300mm deep rc beam

steel casement window  
to details

600 X 200 RC Strip  
Foundation Footing (1:3:6)

SECTION S-16

computer laboratory

ceramic tiles Floor Finish on 150mm deep Conc. on BRC Mesh A142 on  
gauge 500 DPM Sheet on 50mm Murram blinding on well  
Compacted and treated Hardcore to Approval.

## notes

1. All dimensions are in millimetres and are to be read not scaled.
2. All structural works to Structural Engineers details and approved.
3. Note that this is not a working drawing but scheme design for documentation purpose. The contractor is advised to get working drawings from the county Architect before the site handover.
- 8 This drawing is Copyright and should never be reproduced anywhere without the authority of the Architect.

## project title

Proposed construction of computer  
laboratory at butula vtc in  
butula sub-county

## section and elevations

client: DEPARTMENT OF EDUCATION

BUSIA COUNTY

drawing no. PD/ED/82520-001-2

scale : 1:200

Date Aug 25<sup>th</sup>, 2020

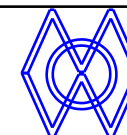
designed

NYANGWESO

checked

drawn

NYANGWESO



MINISTRY OF  
TRANSPORT  
INFRASTRUCTURE &  
PUBLIC WORKS

BUSIA COUNTY  
ARCHITECTURAL DEPARTMENT