

REPUBLIC OF KENYA



COUNTY GOVERNMENT OF KIRINYAGA
P. O. BOX 260-10304
KUTUS

DEPARTMENT OF EDUCATION AND PUBLIC SERVICE

OPEN TENDER

FOR

TENDER NO: CGK/SCM/EDU&PS/OT/008/2018-2019

**FOR THE PROPOSED CONSTRUCTION OF 3 NO.
CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS
AT KIAMWATHI YOUTH POLYTECHNIC, KIRINYAGA
COUNTY**

(RESEVERD FOR AGPO)

NOTICE DATE: FRIDAY 19TH OCTOBER 2018 AT 11.00 A.M

CLOSING DATE: FRIDAY 2ND NOVEMBER 2018 AT 11.00 A.M

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SECTION I - INVITATION TO TENDER

TENDER NAME: THE PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC

TENDER NO: CGK/SCM/EDU&PS/OT/008/2018-2019

The County Government of Kirinyaga invites sealed bids from all interested and eligible contractors for **THE PROPOSED CONSTRUCTION OF THE PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC, KIRINYAGA COUNTY.**

Interested and eligible contractors may obtain further information from and inspect the tender documents at Director Supply Chain Management Office, 1st Floor, Kirinyaga County Headquarters, Kutus during normal working hours.

A complete set of tender documents may be obtained by interested bidders from the Public Procurement Information Portal website <http://tenders.go.ke> or the County website www.kirinyaga.go.ke. Bidders who download the documents from the website **MUST** forward their particulars (Name, contacts, physical address and the tender no./description) immediately to procurement@kirinyaga.go.ke for recording and any further clarifications or addendums.

Tenders must be accompanied by a duly filled, signed and stamped Tender securing declaration form.

Complete tender documents, enclosed in plain sealed envelopes marked with Tender Number/Tender Description Reference shall be addressed to;

**The County Secretary & Head of Public Service,
County Headquarters,
P.O Box 260 – 10304,
Kutus.**

and be deposited in the Tender Box at located at **1st Floor, County Government of Kirinyaga Headquarters, Kutus Town**, on or before **Friday 2nd November 2018 AT 11.00 A.M.**

Tenders will be opened immediately thereafter in the presence of the bidders or their representatives who choose to attend the opening at The County Headquarters, 3rd Floor, Conference Room.

Late bids **SHALL NOT** be accepted.

**HEAD, SUPPLY CHAIN MANAGEMENT
FOR: COUNTY SECRETARY**

SECTION II - INSTRUCTIONS TO TENDERERS

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2.1 Eligible tenderers

2.1.1 This Invitation to tender is open to all tenderers eligible as described in the Instructions to tenderers. The successful Tenderer will be expected to complete the Works by the Intended Completion Date specified in the said Appendix

2.1.2 Tenderers shall include the following information and documents
With their tenders, unless otherwise stated:

- (a) copies of certificates of registration, and principal place of business;
- (b) total monetary value of construction work performed for each of the last five years;
- (c) experience in works of a similar nature and size for each of the last five years, and clients who may be contacted for further information on these contracts;
- (d) major items of construction equipment owned;
- (e) qualifications and experience of key site management and technical personnel proposed for the Contract;
- (f) reports on the financial standing of the Tenderer, such as profit and loss statements and auditor's reports for the last five years;
- (g) Authority to seek references from the Tenderer's bankers.

2.1.3 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.

2.1.4 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the 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 Tenderer's own expense.

2.1.5 A Mandatory pre-tender site meeting shall be held as specified in the appendix to instruction of tender. A representative of the Employer will be available to meet the intending tenderers at the venue.

2.1.6 The procurement entity's employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.

2.2 Cost of Tendering

2.2.1 The Tenderer shall bear all costs associated with the preparation and submission of its tender, and the procuring entity, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

- 2.2.2 A complete set of tender documents may be obtained by interested bidders from the National Treasury Supplier Portal website <http://tenders.go.ke> or the County website www.kirinyaga.go.ke. Bidders who download the documents from the website **MUST** forward their particulars (Name, contacts, physical address and the tender no./ description) immediately for recording and any further clarifications and addenda to procurement@kirinyaga.go.ke
- 2.2.3 All firms found capable of performing the contract satisfactorily in accordance with the set prequalification criteria shall be prequalified.

2.3. The Tender Document

- 2.12.1 The tender document comprises the documents listed below, and addenda issued in accordance with clause 2.6 of these instructions to Tenderers
- (i) Invitation to Tender
 - (ii) Instructions to tenderers
 - (iii) General Conditions of Contract
 - (iv) Special Conditions of Contract
 - (v) Schedule of requirements
 - (vi) Technical Specifications
 - (vii) Tender Form and Price Schedules
 - (viii) Tender Security Form
 - (ix) Contract Form
 - (x) Performance Security Form
 - (xi) Bank Guarantee for Advance Payment Form
 - (xii) Manufacturer's Authorization Form
 - (xiii) Confidential Business Questionnaire

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

2.4 Clarification of Documents

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

2.5 Amendment of Documents

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

2.6 Language of Tender

- 2.6.1 The tender prepared by the tenderer, as well as all correspondence and documents relating to the tender exchange by the tenderer and the Procuring entity, shall be written in English language, provided that any printed literature furnished by the tenderer may be written in another language provided they are accompanied by an accurate English translation of the relevant passages in which case, for purposes of interpretation of the tender, the English translation shall govern.

2.7 Documents Comprising of Tender

- 2.7.1 The tender prepared by the tenderers shall comprise the following components
- (a) a Tender Form and a Price Schedule completed in accordance with paragraph 2.9, 2.10 and 2.11 below
 - (b) documentary evidence established in accordance with paragraph 2.1 that the tenderer is eligible to tender and is qualified to perform the contract if its tender is accepted;
 - (c) documentary evidence established in accordance with paragraph 2.2 that the goods and ancillary services to be supplied by the tenderer are eligible goods and services and conform to the tender documents; and
 - (d) tender security furnished in accordance with paragraph 2.14

2.8 Tender Forms

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

2.9 Tender Prices

- 2.9.1 The tenderer shall indicate on the appropriate Price Schedule the unit prices and total tender price of the goods it proposes to supply under the contract

- 2.1.1 Prices indicated on the Price Schedule shall include all costs including taxes, insurances and delivery to the premises of the entity.
- 2.2.1 Prices quoted by the tenderer shall be fixed during the Tender's performance of the contract and not subject to variation on any account. A tender submitted with an adjustable price quotation will be treated as non-responsive and will be rejected, pursuant to paragraph 2.22
- 2.3.1 The validity period of the tender shall be 120 days from the date of opening of the tender.

2.10 Tender Currencies

- 2.10.1 Prices shall be quoted in Kenya Shillings unless otherwise specified in the Appendix to Instructions to Tenderers.

2.11 Tenderers Eligibility and Qualifications

- 2.11.1 Pursuant to paragraph 2.1. The tenderer shall furnish, as part of its tender, documents establishing the tenderers eligibility to tender and its qualifications to perform the contract if its tender is accepted.
- 2.11.2 The documentary evidence of the tenderers eligibility to tender shall establish to the Procuring entity's satisfaction that the tenderer, at the time of submission of its tender, is from an eligible source country as defined under paragraph 2.1
- 2.11.3 The documentary evidence of the tenderers qualifications to perform the contract if its tender is accepted shall be established to the Procuring entity's satisfaction;
 - (a) that, in the case of a tenderer offering to supply goods under the contract which the tenderer did not manufacture or otherwise produce, the tenderer has been duly authorized by the goods' Manufacturer or producer to supply the goods.
 - (b) that the tenderer has the financial, technical, and production capability necessary to perform the contract;
 - (c) that, in the case of a tenderer not doing business within Kenya, the tenderer is or will be (if awarded the contract) represented by an Agent in Kenya equipped, and able to carry out the Tenderer's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications.

2.12. Goods Eligibility and Conformity to Tender Documents

- 2.12.1 Pursuant to paragraph 2.2 of this section, the tenderer shall furnish, as part of its tender documents establishing the eligibility and conformity to the tender documents of all goods which the tenderer proposes to supply under the contract

2.12.3 The documentary evidence of the eligibility of the goods shall consist of a statement in the Price Schedule of the country of origin of the goods and

Particulars of tender security if applicable. Dully filled Tender Security services offered which shall be confirmed by a certificate of origin issued at the time of shipment.

2.12.4 The documentary evidence of conformity of the goods to the tender documents may be in the form of literature, drawings, and data, and shall consist of:

- (a) a detailed description of the essential technical and performance characteristic of the goods;
- (b) a list giving full particulars, including available source and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period of two (2) years, following commencement of the use of the goods by the Procuring entity; and
- (c) a clause-by-clause commentary on the Procuring entity's Technical Specifications demonstrating substantial responsiveness of the goods and service to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.

2.12.5 For purposes of the documentary evidence to be furnished pursuant to paragraph 2.13.3(c) above, the tenderer shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procurement entity in its Technical Specifications, are intended to be descriptive only and not restrictive. The tenderer may substitute alternative standards, brand names, and/or catalogue numbers in its tender, provided that it demonstrates to the Procurement entity's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

2.13 Tender Security

2.13.1. The tenderer shall furnish, as part of its tender, a tender security for the amount specified in the Appendix to Invitation to Tenderers..

2.13.2. The tender security is required to protect the Procuring entity against the risk of Tenderer's conduct which would warrant the security's forfeiture, pursuant to paragraph

2.13.3. The tender security shall be denominated in Kenya Shillings or in another freely convertible currency, and shall be in the form of a bank guarantee issued by a reputable bank located in Kenya or a guarantee issued by a reputable insurance company accredited by Public Procurement Regulatory Authority in the form provided in the tender documents valid for thirty (30) days beyond the validity of the tender.

2.13.4. Any tender not secured in accordance with paragraph 2.14.1 and 2.14.3 will be rejected by the Procuring entity as non-responsive, pursuant to paragraph 2.22

2.13.5. Unsuccessful Tenderer's tender security will be discharged or returned as promptly as possible as but not later than thirty (30) days after the expiration of the period of tender validity prescribed by the Procuring entity.

2.13.6. The successful Tenderer's tender security will be discharged upon the tenderer signing the contract, pursuant to paragraph 2.27 and furnishing the performance security, pursuant to paragraph 2.28

2.13.7. The tender security may be forfeited:

- (a) if a tenderer withdraws its tender during the period of tender validity specified by the procuring entity on the Tender Form; or
- (b) in the case of a successful tenderer, if the tenderer fails:
 - (i) to sign the contract in accordance with paragraph 2.27
 - or
 - (ii) to furnish performance security in accordance with paragraph 2.28

2.14 Validity of Tenders

2.15.1 Tenders shall remain valid for 120 days or as specified in the Invitation to tender after the date of tender opening prescribed by the Procuring entity, pursuant to paragraph 2.18. A tender valid for a shorter period shall be rejected by the Procuring entity as non-responsive.

2.15.2 In exceptional circumstances, the Procuring entity may solicit the Tenderer's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The tender security provided under paragraph 2.14 shall also be suitably extended. A tenderer may refuse the request without forfeiting its tender security. A tenderer granting the request will not be required nor permitted to modify its tender.

2.16 Format and Signing of Tender

2.16.1 The Procuring entity shall prepare copies of the tender, clearly marking each "ORIGINAL TENDER" and "COPY OF TENDER," as appropriate. In the event of any discrepancy between them, the original shall govern.

2.16.2 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by the tenderer or a person or persons duly authorized to bind the tenderer to the contract. The latter authorization shall be indicated by written power-of-attorney accompanying the tender. All pages of the tender, except for unamended printed literature, shall be initialed by the person or persons signing the tender.

2.16.3 The tender shall have no interlineations, erasures, or overwriting except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person or persons signing the tender.

2.7 Sealing and Marking of Tenders

2.17.1 The Tenderer shall seal the original and each copy of the tender in separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." The envelopes shall then be sealed in an outer envelope.

2.17.2 The inner and outer envelopes shall:

- (a) (a) be addressed to the Procuring entity at the address given in the Invitation to Tender:
- (b) Bear, tender number and name in the Invitation for Tenders and the words, "DO NOT OPEN BEFORE," **Friday 2nd November 2018 AT 11.00 A.M.**

2.17.3 The inner envelopes shall also indicate the name and address of the tenderer to enable the tender to be returned unopened in case it is declared "late".

2.17.4 If the outer envelope is not sealed and marked as required by paragraph 2.17.2, the Procuring entity will assume no responsibility for the tender's misplacement or premature opening.

2.18 Deadline for Submission of Tenders

2.18.1 Tenders must be received by the Procuring entity at the address specified under paragraph 2.17.2 no later than **Friday 2nd November 2018 AT 11.00 A.M.**

2.18.2 The Procuring entity may, at its discretion, extend this deadline for the submission of tenders by amending the tender documents in accordance with paragraph 2.6, in which case all rights and obligations of the Procuring entity and candidates previously subject to the deadline will therefore be subject to the deadline as extended

2.19 Modification and Withdrawal of Tenders

2.19.1 The tenderer may modify or withdraw its tender after the tender's submission, provided that written notice of the modification, including substitution or withdrawal of the tenders, is received by the Procuring Entity prior to the deadline prescribed for submission of tenders.

2.19.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of paragraph 2.17. A withdrawal notice may also be sent by cable, telex but followed by a signed confirmation copy, postmarked not later than the deadline for submission of tenders.

2.19.3 No tender may be modified after the deadline for submission of tenders.

2.19.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the expiration of the period of tender validity specified by the tenderer on the Tender Form. Withdrawal of a tender during

this interval may result in the Tenderer's forfeiture of its tender security, pursuant to paragraph 2.14.7

2.19.5 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

2.19.6 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

2.20 Opening of Tenders

2.20.1 The Procuring entity will open all tenders in the presence of tenderers' representatives who choose to attend, on **Friday 2nd November 2018 AT 11.00 A.M.** And in the location specified in the Invitation to Tender.

The tenderers' representatives who are present shall sign a register evidencing their attendance.

2.20.2 The tenderers' names, tender modifications or withdrawals, tender prices, discounts and the presence or absence of requisite tender security and such other details as the Procuring entity, at its discretion, may consider appropriate, will be announced at the opening.

2.20.3 The Procuring entity will prepare minutes of the tender opening.

2.21 Clarification of Tenders

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

2.21.2 Any effort by the tenderer to influence the Procuring entity in the Procuring entity's tender evaluation, tender comparison or contract award decisions may result in the rejection of the tenderers' tender.

2.22 Preliminary Examination

2.22.1 The Procuring entity will examine the tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the tenders are generally in order.

2.22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the candidate does not accept the correction of the

errors, its tender will be rejected, and its tender security forfeited. If there is a discrepancy between words and figures the amount in words will prevail.

2.22.3 The Procuring entity may waive any minor informality or non-conformity or irregularity in a tender which does not constitute a material deviation, provided such waiver does not prejudice or effect the relative ranking of any tenderer.

2.22.4 Prior to the detailed evaluation, pursuant to paragraph 2.24 the Procuring entity will determine the substantial responsiveness of each tender to the tender documents. For purposes of these paragraphs, a substantially responsive tender is one, which conforms to all the terms and conditions of the tender documents without material deviations. The Procuring entity's determination of a tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.

2.22.5 If a tender is not substantially responsive, it will be rejected by the Procuring entity and may not subsequently be made responsive by the tenderer by correction of the non-conformity.

Conversion to Single Currency

2.23.1 Where other currencies are used, the procuring entity will convert these currencies to Kenya Shillings using the selling exchange rate on the date of tender closing provided by the Central Bank of Kenya.

2.23 Evaluation and Comparison of Tenders

2.24.1 The Procuring entity will evaluate and compare the tenders which have been determined to be substantially responsive, pursuant to paragraph 2.22

2.24.2 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

2.24.3 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

2.25 Preference

25.1 Preference where allowed in the evaluation of tenders shall not exceed 30%

2.26 Contacting the Procuring entity

2.26.1 Subject to paragraph 2.21 no tenderer shall contact the Procuring entity on any matter related to its tender, from the time of the tender opening to the time the contract is awarded.

2.26.2 Any effort by a tenderer to influence the Procuring entity in its decisions on tender, evaluation, tender comparison, or contract award may result in the rejection of the Tenderer's tender.

2.27 Award of Contract

(a) Post-qualification

2.27.1 In the absence of pre-qualification, the Procuring entity will determine to its satisfaction whether the tenderer that is selected as having submitted the lowest evaluated responsive tender is qualified to perform the contract satisfactorily.

2.27.2 The determination will take into account the tenderer financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the tenderer's qualifications submitted by the tenderer, pursuant to paragraph 2.12.3 as well as such other information as the Procuring entity deems necessary and appropriate.

2.27.3 An affirmative determination will be a prerequisite for award of the contract to the tenderer. A negative determination will result in rejection of the Tenderer's tender, in which event the Procuring entity will proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.

(b) Award Criteria

2.27.4 The Procuring entity will award the contract to the successful tenderer(s) whose tender has been determined to be substantially responsive and has been determined to be the lowest evaluated tender, provided further that the tenderer is determined to be qualified to perform the contract satisfactorily.

(c) Procuring entity's Right to Vary quantities

2.27.5 The Procuring entity reserves the right at the time of contract award to increase or decrease the quantity of goods originally specified in the Schedule of requirements without any change in unit price or other terms and conditions

(d) Procuring entity's Right to Accept or Reject Any or All Tenders

2.27.6 The Procuring entity reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the Procuring entity's action

2.28 Notification of Award

2.28.1 Prior to the expiration of the period of tender validity, the Procuring entity will notify the successful tenderer in writing that its tender has been accepted.

2.28.2 The notification of award will constitute the formation of the Contract but will have to wait until the contract is finally signed by both parties

2.28.3 Upon the successful Tenderer's furnishing of the performance security pursuant to paragraph 2.28, the Procuring entity will promptly notify each unsuccessful Tenderer and will discharge its tender security, pursuant to paragraph 2.14

2.29 Signing of Contract

2.29.1 At the same time as the Procuring entity notifies the successful tenderer that its tender has been accepted, the Procuring entity will send the tenderer the Contract Form provided in the tender documents, incorporating all agreements between the parties.

2.29.2 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

2.29.3 Within thirty (30) days of receipt of the Contract Form, the successful tenderer shall sign and date the contract and return it to the Procuring entity.

2.30 Performance Security

2.30.1 Within Thirty (30) days of the receipt of notification of award from the Procuring entity, the successful tenderer shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the tender documents, or in another form acceptable to the Procuring entity.

2.30.2 Failure of the successful tenderer to comply with the requirements of paragraph 2.27 or paragraph 2.28 shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender security, in which event the Procuring entity may make the award to the next lowest evaluated Candidate or call for new tenders.

2.31 Corrupt or Fraudulent Practices

2.31.1 The Procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contracts when used in the present regulations, the following terms are defined as follows;

- (i) "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
- (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring entity, and includes collusive practice among tenderer (prior to or after tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the Procuring entity of the benefits of free and open competition;

2.31.2 The procuring entity will reject a proposal for award if it determines that the tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

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

SECTION III - APPENDIX TO INSTRUCTIONS TO TENDERERS

Appendix to Instructions to Tenderers/General information

The following information regarding the particulars of the tender shall complement supplement or amend the provisions of the instructions to tenderers. Wherever there is a conflict between the provision of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers.

ITT Clause Number	Amendments of, and Supplements to, Clauses in the Instruction to Tenderers
2.1.1	Eligible tenderers: Open to all interested and Eligible contractors
2.1.5	Tenderers are required to attend a mandatory Pre-Bidding & Site Visit meeting on Friday, 26th October, 2018 at 11.00am . Tenderers will converge at Kirinyaga County Headquarters, 3rd floor, Conference Room before heading to the site. All interested prospective bidders should attend.
2.4.1	The address for clarification of Tender documents is Attention: The Head Supply Chain Management, County Government of Kirinyaga, P.O. Box 260 – 10304, Kutus.
2.6.1	The Language of all correspondence and documents related to the Tender is: English
2.9.3	The prices shall be FIXED
2.10.1	Prices shall be quoted in Kenya Shillings
2.14.1	Dully filled Tender Security Declaration Form in format provided
2.15.1	The Tender validity period shall be 120 days .
2.16.2	The number of copies of the Tender to be completed and returned shall be: One (1) original and two (2) copies .
2.17.2	Tender shall be submitted to: The Head Supply Chain Management, County Government of Kirinyaga, P.O. Box 260 – 10304, Kutus.
2.20.1	The Tender opening shall take place at: Kirinyaga County Headquarters, 3 rd floor, Conference Room. Date: Friday 2nd November, 2018 Time: 11.00am local time.

2.22	<p>The Preliminary evaluation shall be mandatory:</p> <p>The evaluation shall adopt YES/ No Approach. The non-responsive submissions will be eliminated from the entire preliminary evaluation process and will not be considered further.</p> <p>Bidders must submit the following documents and Must be certified (signed and stamped) by commissioner of oaths/advocate registered in Kenya:</p> <ul style="list-style-type: none"> • Valid current year business permit. • Valid current Tax Compliance Certificate. • Valid AGPO Certificate • Certificate of incorporation. • CR 12 Certificate/ Form • NCA building works-category 6 and above. • PIN/VAT certificate from KRA • Bank statements for the last One year • Lines of credit letter(s) from banks • Financial audited accounts for two (2) previous year endorsed, signed and stamped by a registered external auditor. • Copies of Academic/ Professional Certificates • Copies of Assets Ownership documents e.g. Log books, Lease agreements, Titles, etc. <p>AT THIS STAGE, THE TENDERER'S SUBMISSION WILL EITHER BE RESPONSIVE OR NON RESPONSIVE. THE NON RESPONSIVE SUBMISSIONS WILL BE ELIMINATED FROM THE ENTIRE EVALUATION PROCESS AND WILL NOT BE CONSIDERED FURTHER.</p>
2.24	<p>Evaluation and Comparison of Tenders (Technical Evaluation)</p> <ul style="list-style-type: none"> • Shall be as per evaluation criteria provided below. • All tender responses will be evaluated, and the winning tender selected on the basis of "best value" in terms of technical superiority as well as cost effectiveness. • A tenderer must score a minimum of 70% to be considered for price comparison.
2.27	<p>Post – qualification: Shall be undertaken</p>
2.24.3	<p>Award Criteria: <i>Proposals will be awarded according to their combined technical (St) and financial (Sf) scores.</i></p>
2.30.1	<p>Particulars of performance security if applicable.- 10% of the contract sum from a reputable financial institution</p>

EVALUATION PROCESS / EVALUATION CRITERIA

STAGE 1. PRELIMINARY REQUIREMENTS

1. All entries must be typed or written in ink. Mistakes must not be erased but should be crossed out and corrections made and initialed by the persons signing the tender.
2. The Form of Bid **shall** be duly filled, signed and stamped by an individual entrusted with the powers of attorney.
3. The bidder shall provide **1 ORIGINAL copy** of the bid document and **2 other COPIES** and be marked as original or copy and placed in one envelope. Each bid should be submitted in a plain sealed envelope with the Tender Number and description endorsed on the outside.
4. The bidder shall attach a duly filled, signed and stamped confidential business questionnaire by an individual entrusted with the powers of attorney.
5. The Form of power of attorney shall be duly filled, signed and stamped.
6. Tenderers shall ensure that the submitted bid documents are duly serialized/paginated on each page, well bound and intact.
7. All submitted forms and documents shall be duly filled, signed (where applicable) and stamped.

Bidders shall attach copies of the under listed documents and Must be certified (signed and stamped) by commissioner of oaths/advocate registered in Kenya:

8. Valid current year business permit.
9. Valid current Tax Compliance Certificate.
10. Valid AGPO Certificate
11. Certificate of incorporation.
12. CR 12 Certificate/ Form
13. NCA building works-category 6 and above.
14. PIN/VAT certificate from KRA
15. Bank statements for the last One year
16. Lines of credit letter(s) from banks
17. Financial audited accounts for two (2) previous year endorsed, signed and stamped by a registered external auditor.
18. Copies of Academic/ Professional Certificates
19. Copies of Assets Ownership documents eg. Log books, Lease agreements, Titles, etc

Bidders that will not comply with the above criteria shall be considered non-responsive at this point and disqualified from further evaluation.

STAGE 2. TECHNICAL EVALUATION

2. TECHNICAL EVALUATION		
CRITERIA	DESCRIPTION	MAX SCORE %
(A) LEGAL CAPACITY		
Legal Capacity	1. History of Non-Performing Contracts	2.5
	2. Pending Litigation	2.5
TOTAL (Legal Capacity)		5.00
(B) FINANCIAL PERFORMANCE		
Financial performances	Submission of Audited Financial reports for the last two [2years, Certified Bank statements and lines of credit, etc to demonstrate:	
	(a) the current soundness of the applicants financial position and its prospective long term profitability - last two (2) years audited reports	5.00
	(b) Evidence of adequacy of working capital: - Last 12 Months certified Bank statements or Letter from the bank confirming availability of adequate funds to perform the contract (minimum Kshs 10 million). (5% for bank statements, 10% for Ksh10-15 million, 15% for above Ksh15 million).	15.00
TOTAL (Financial performance)		20.00
(C) CONSTRUCTION EXPERIENCE		
Construction experience	(A) General Construction Experience	
	Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last 5 years prior to the applications submission deadline. Provide list showing project name, contract period, contract sum, commencement date, completion date, and percentage currently.	10.00
	(B) Specific Construction Experience	
	Experience as roads contractor, management contractor or subcontractor, in at least three (3) public (government) contracts within the last Five (5) years, each with a value of at least Kshs. 5,000,000.00), that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods/ technology or other characteristics as described in Scope of Works. Attach certified copies of completion certificates	15.00
	(C) Work methodology	
	Methodology for implementing of works (Submit proposals of works methods and schedule in sufficient detail to demonstrate	5.00

	the adequacy of the bidders' proposals to meet the technical specifications and the completion time referred to in Clause 1.2 above.	
TOTAL (Construction experience)		30.00
(D) Construction Equipment Capacity		
Essential Equipment Availability	Proof of essential Building construction equipment ownership or proposal for timely acquisition. Attach evidence of either (owned, leased, hired etc) including Models, photos, capacities, current working conditions, etc	
	Site equipment: Earthmoving, Compactors, Excavators etc (3Mks each up to a maximum of 5 equipment)	15.00
	Transport equipment: Tippers, dumpers, water tankers etc (2Mks each up-to 3 equipment)	6.00
TOTAL (Construction Equipment Capacity)		20.00
CRITERIA	DESCRIPTION	MAX SCORE %
(E) KEY PERSONNEL		
Key Personnel competences	Qualification and experience of key personnel. Attach certified copies of C.Vs and certificates).	
	(i) Construction/Project Manager (the overall in charge person(s) to be assigned for the site) with at least five years' experience in works of an equivalent nature and volume. Minimum Degree in Business or Engineering related field, Degree – 5mks; 5Years – 5nm Mks ;5 Years & above -10Mks	10.00
	(ii) Site Agent with at least five years' experience in works of an equivalent nature and volume. Minimum Diploma in Building Construction Diploma 3Mks; 5 Years -5Mks; 5 Years & above -7Mks)	10.00
	(iii) Site surveyor with at least five years' experience in works of an equivalent nature and volume. Minimum Certificate in Building Construction with NCA accreditation. Certificate 2Mks; 5 Years -2Mks; 5 Years & above -3Mks)	5.00
	(iv) Foreman with at least five years' experience in works of an equivalent nature and volume. Minimum Certificate in Building Construction with NCA accreditation. Certificate 2Mks; 5 Years -2Mks; 5 Years & above -3Mks)	5.00
TOTAL (key personnel)		25.00
GRAND TOTAL	(Totals for; A, B, C, D, & E)	100.00

In addition to the mandatory requirements above, a minimum technical score of 70% shall be required to proceed to evaluation of the financial bids.

STAGE 3: FINANCIAL EVALUATION

- i) The financial evaluation will commence with financial ranking of the bids from the lowest to the highest.
- ii) In case of discrepancy between the unit price and the total price, the unit price shall prevail.
- iii) Errors will be calculated and the effect of the error on the overall bid shall be reported. Errors beyond 5% will lead to disqualification.
- iv) Comparison of bids with the estimate will be done and reported. Bids with inconsistent rating (Front, mid, back loading) will be noted and may be disqualified.
- v) Comparison of bid rates with the estimate/ market rates will be done and discrepancies reported.
- vi) The bidder who meets the all the above conditions, achieves the Highest Combined Technical and Financial Score will be recommended for further consideration.

Summary of Evaluation and Comparison of Tenders

The following evaluation criteria shall be applied not withstanding any other requirement in the tender documents.

Selection Process

Quality Cost Based Selection

STEP 1: Preliminary evaluation

This will be an elimination stage which will be done as per criteria above

STEP 2: Technical Evaluation

Tenderers will be required to provide technical details on their product that meets the provided technical requirement. Only Tenderers who score 70% and above will be considered to be technically responsive and therefore be considered for further evaluation

- **Technical Evaluation Shall be based as per the evaluation criteria provided above**

Only bidders who score 70% and above will be subjected to financial evaluation. Those who score below 70% will be eliminated at this stage from the entire evaluation process and will not be considered further.

STEP 3: Financial Evaluation

The financial submissions of the required services will be divided by the lowest bidder's financial quote to determine the financial score of each bidder using the formulae below:

Sf = 100 X F_m/F where: Sf is the financial score; F_m is the lowest priced financial proposal and F is the price of the proposal under consideration.

Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (**T=the weight given to the Technical Proposal as 80%: P = the weight given to the Financial Proposal as 20%**)

Combined Technical and Financial scores is: - S = St x T% + Sf x P%

Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T=the weight given to the Technical Proposal: P = the weight given to the Financial Proposal; T + p = 1)

The table below summarises the overall evaluation process and the proposed weighting of each stage.

AREA RATING	RATING/SCORE
STEP 1: Preliminary evaluation	Elimination
STEP 2: Technical Evaluation	80
STEP 3: Financial Evaluation	20
Combined Technical and Financial Score	100

STAGE 4 - POST-QUALIFICATION

An evaluation committee may, after tender evaluation, but prior to the award of the tender, conduct due diligence and present the report in writing to confirm and verify the qualifications of the tenderer who submitted the highest combined technical (St) and financial (Sf) scores.

The conduct of due diligence may include obtaining confidential references from persons with whom the tenderer has had prior engagement.

To acknowledge that the report is a true reflection of the proceedings held, each member who was part of the due diligence by the evaluation committee shall-

- (a) initial each page of the report; and
- (b) append his or her signature as well as their full name and designation.

SECTION IV: CONDITIONS OF CONTRACT

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CONDITIONS OF CONTRACT

1. Definitions

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

“Bill of Quantities” means the priced and completed Bill of Quantities forming part of the tender.

“Compensation Events” are those defined in Clause 24 hereunder.

“The Completion Date” means the date of completion of the Works as certified by the Project Manager, in accordance with Clause 31.

“The Contract” means the agreement entered into between the Employer and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works,

“The Contractor” refers to the person or corporate body whose tender to carry out the Works has been accepted by the Employer.

“The Contractor’s Tender” is the completed tendering document submitted by the Contractor to the Employer.

“The Contract Price” is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

“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 Certificate” is the certificate issued by Project Manager upon correction of defects by the Contractor.

“The Defects Liability Period” is the period named in the Contract Data and calculated from the Completion Date.

“Drawings” include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

“Day-works” are Work inputs subject to payment on a time basis for labour and the associated materials and plant.

“Employer”, or the **“Procuring entity”** as defined in the Public Procurement Regulations (i.e. Central or Local Government

administration, Universities, Public Institutions and Corporations, etc) 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.

“The Intended Completion Date” is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

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

“Plant” is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

“Project Manager” is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Architect” or a “Quantity Surveyor” registered under the Architects and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

“Site” is the area defined as such in the Appendix to Condition of Contract.

“Site Investigation Reports” are those reports that may be included in the tendering documents which are factual and interpretative about the surface and subsurface conditions at the Site.

“Specifications” means the Specifications of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

“Start Date” is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

“A Subcontractor” 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 Project Manager which varies the Works.

“The Works” are what the Contract requires the Contractor to construct, install, and turnover to the Employer, as defined in the Appendix to Conditions of Contract.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning in English Language unless specifically defined. The Project Manager will provide instructions clarifying queries about these Conditions of Contract.

2.2 If sectional completion is specified in the Appendix to Conditions of Contract, reference in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any section of the Works (other than references to the Intended Completion Date for the whole of the Works).

2.3 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) Appendix to Conditions of Contract,
- (5) Conditions of Contract,
- (6) Specifications,
- (7) Drawings,
- (8) Bill of Quantities,
- (9) Any other documents listed in the Appendix to Conditions of Contract as forming part of the Contract.

Immediately after the execution of the Contract, the Project Manager shall furnish both the Employer and the Contractor with two copies each of all the Contract documents. Further, as and when necessary the Project Manager shall furnish the Contractor [always with a copy to the Employer] with three [3] copies of such further drawings or details or descriptive schedules as are reasonably necessary either to explain or amplify the Contract drawings or to enable the Contractor to carry out and complete the Works in accordance with these Conditions.

3. Language and Law

3.1 Language of the Contract and the law governing the Contract shall be English language and the Laws of Kenya respectively unless otherwise stated.

4 Project Manager's Decisions

- 4.1 Except where otherwise specifically stated, the Project Manager will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5 Delegation

- 5.1 The Project Manager may delegate any of his duties and responsibilities to others after notifying the Contractor.

6 Communications

- 6.1 Communication between parties shall be effective only when in writing. A notice shall be effective only when it is delivered.

7 Subcontracting

- 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.

8 Other Contractors

- 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities etc. as listed in the Appendix to Conditions of Contract and also with the Employer, as per the directions of the Project Manager. The Contractor shall also provide facilities and services for them. The Employer may modify the said List of Other Contractors etc., and shall notify the Contractor of any such modification.

9 Personnel

- 9.1 The Contractor shall employ the key personnel named in the Qualification Information, to carry out the functions stated in the said Information or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Qualification Information. If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Work in the Contract.

10 Works

- 10.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings. 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 Project Manager, and complete them by the Intended Completion Date.

11 Safety and Temporary Works

- 11.1 The Contractor shall be responsible for the design of temporary works. However before erecting the same, he shall submit his designs including specifications and drawings to the Project Manager and to any other relevant third parties for their approval. No erection of temporary works shall be done until such approvals are obtained.
- 11.2 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary works and all drawings prepared by the Contractor for the execution of the temporary or permanent Works, shall be subject to prior approval by the Project Manager before they can be used.
- 11.3 The Contractor shall be responsible for the safety of all activities on the Site.

12. Discoveries

- 12.1 Anything of historical or other interest or of significant value unexpectedly discovered on Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

13. Work Program

- 13.1 Within the time stated in the Appendix to Conditions of Contract, the Contractor shall submit to the Project Manager for approval a program showing the general methods, arrangements, order, and timing for all the activities in the Works. An update of the program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Work, including any changes to the sequence of the activities.
- 13.2 The Contractor shall submit to the Project Manager for approval an updated program at intervals no longer than the period stated in the Appendix to Conditions of Contract.
- 13.3 If the Contractor does not submit an updated program within this period, the Project Manager may withhold the amount stated in the said Appendix from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted. The Project Manager's approval of the program shall not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Project Manager again at any

time. A revised program shall show the effect of Variations and Compensation Events.

14. Possession of Site

14.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Appendix to Conditions of Contract, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.

15. Access to Site

15.1 The Contractor shall allow the Project Manager and any other person authorised by the Project Manager, 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.

16. Instructions

16.1 The Contractor shall carry out all instructions of the Project Manager which are in accordance with the Contract.

17. Extension or Acceleration of Completion Date

17.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Work, which would cause the Contractor to incur additional cost. The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager in writing for a decision upon the effect of a Compensation Event or variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay caused by such failure shall not be considered in assessing the new (extended) Completion Date.

17.2 No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

18. Management Meetings

18.1 A Contract management meeting shall be held monthly and attended by the Project Manager and the Contractor. Its business shall be to review the plans for the remaining Work and to deal with matters raised in accordance with the early warning procedure. The Project Manager shall record the minutes of management meetings and provide copies of the same to those attending the meeting and the Employer. The

responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

19. Early Warning

- 19.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the Work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 19.2 The Contractor shall cooperate with the Project Manager in making and considering proposals on how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the Work and in carrying out any resulting instructions of the Project Manager.

20. Defects

- 20.1 The Project Manager shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a defect and to uncover and test any Work that the Project Manager 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.
- 20.2 The Project Manager 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. The Defects Liability Period shall be extended for as long as defects remain to be corrected.
- 20.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Project Manager's notice. If the Contractor has not corrected a defect within the time specified in the Project Manager's notice, the Project Manager 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.

21. Bills of Quantities

- 21.1 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 rate in the Bills of Quantities for each item.
- 21.2 If the final quantity of the Work done differs from the quantity in the Bills of Quantities for the particular item by more than 25 percent and provided the change exceeds 1 percent of the Initial Contract price, the Project Manager shall adjust the rate to allow for the change.
- 21.3 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bills of Quantities.

22. Variations

- 22.1 All variations shall be included in updated programs produced by the Contractor and shall be guided by the Public Procurement and Disposal Act 2015, Sec 139 .
- 22.2 The Contractor shall provide the Project Manager with a quotation for carrying out the variations when requested to do so. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period as may be stated by the Project Manager and before the Variation is ordered.
- 22.3 If the work in the variation corresponds with an item description in the Bills of Quantities and if in the opinion of the Project Manager, the quantity of work is not above the limit stated in Clause 21.2 or the timing of its execution does not cause the cost per unit of quantity to change, the rate in the Bills of Quantities shall be used to calculate the value of the variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the variation does not correspond with items in the Bills of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 22.4 If the Contractor's quotation is unreasonable, the Project Manager may order the variation and make a change to the Contract price, which shall be based on the Project Manager's own forecast of the effects of the variation on the Contractor's costs.
- 22.5 If the Project Manager decides that the urgency of varying the Work would prevent a quotation being given and considered without delaying the Work, no quotation shall be given and the variation shall be treated as a Compensation Event.
- 22.6 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

- 22.7 When the Program is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.

23. Payment Certificates, Currency of Payments and Advance Payments

- 23.1 The Contractor shall submit to the Project Manager monthly applications for payment giving sufficient details of the Work done and materials on Site and the amounts which the Contractor considers himself to be entitled to. The Project Manager shall check the monthly application and certify the amount to be paid to the Contractor within 14 days. The value of Work executed and payable shall be determined by the Project Manager.
- 23.2 The value of Work executed shall comprise the value of the quantities of the items in the Bills of Quantities completed, materials delivered on Site, variations and compensation events. Such materials shall become the property of the Employer once the Employer has paid the Contractor for their value. Thereafter, they shall not be removed from Site without the Project Manager's instructions except for use upon the Works.
- 23.3 Payments shall be adjusted for deductions for retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of issue of each certificate. If the Employer makes a late payment, the Contractor shall be paid simple interest on the late payment in the next payment. Interest shall be calculated on the basis of number of days delayed at a rate three percentage points above the Central Bank of Kenya's average rate for base lending prevailing as of the first day the payment becomes overdue.
- 23.4 If an amount certified is increased in a later certificate or as a result of an award by an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 23.5 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
- 23.6 The Contract Price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya Shillings and foreign currency in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate of exchange for the calculation of the amount of foreign currency payment shall be the rate of exchange indicated in the Appendix to Conditions of Contract. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services, the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Project Manager shall be notified promptly by the

Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Schedule of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order to reflect appropriately such changes.

23.7 In the event that an advance payment is granted, the following shall apply: -

- a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.
- b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.
- c) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by means of the formula:

$$R = \frac{A(x^1 - x^{11})}{80 - 20}$$

Where:

- R = the amount to be reimbursed
- A = the amount of the advance which has been granted
- X¹ = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.
- X¹¹ = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

- d) with each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

24. Compensation Events

24.1 The following issues shall constitute Compensation Events:

- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Appendix to Conditions of Contract.
- (b) The Employer modifies the List of Other Contractors, etc., in a way that affects the Work of the Contractor under the Contract.
- (c) The Project Manager orders a delay or does not issue drawings, specifications or instructions required for execution of the Works on time.
- (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon the Work, which is then found to have no defects.
- (e) The Project Manager unreasonably does not approve a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to tenderers (including the Site investigation reports), from information available publicly and from a visual inspection of the Site.
- (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The effects on the Contractor of any of the Employer's risks.
- (j) The Project Manager unreasonably delays issuing a Certificate of Completion.
- (k) Other compensation events described in the Contract or determined by the Project Manager shall apply.

24.2 If a compensation event would cause additional cost or would prevent the Work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

- 24.3 As soon as information demonstrating the effect of each compensation event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.
- 24.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having co-operated with the Project Manager.
- 24.5 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Appendix to Conditions of Contract.
- 24.6 The Contractor shall give written notice to the Project Manager of his intention to make a claim within thirty days after the event giving rise to the claim has first arisen. The claim shall be submitted within thirty days thereafter.

Provided always that should the event giving rise to the claim of continuing effect, the Contractor shall submit an interim claim within the said thirty days and a final claim within thirty days of the end of the event giving rise to the claim.

25. Price Adjustment

- 25.1 The Project Manager shall adjust the Contract Price if taxes, duties and other levies are changed between the date 30 days before the submission of tenders for the Contract and the date of Completion. The adjustment shall be the change in the amount of tax payable by the Contractor.
- 25.2 The Contract Price shall be deemed to be based on exchange rates current at the date of tender submission in calculating the cost to the Contractor of materials to be specifically imported (by express provisions in the Contract Bills of Quantities or Specifications) for permanent incorporation in the Works. Unless otherwise stated in the Contract, if at any time during the period of the Contract exchange rates shall be varied and this shall affect the cost to the Contractor of such materials, then the Project Manager shall assess the net difference in the cost of such materials. Any amount from time to time so assessed shall be added to or deducted from the Contract Price, as the case may be.
- 25.3 Unless otherwise stated in the Contract, the Contract Price shall be deemed to have been calculated in the manner set out below and in sub-

clauses 25.4 and 25.5 and shall be subject to adjustment in the events specified thereunder;

- (i) The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the rates of wages and other emoluments and expenses as determined by the Joint Building Council of Kenya (J.B.C.) and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.
- (ii) Upon J.B.C. determining that any of the said rates of wages or other emoluments and expenses are increased or decreased, then the Contract Price shall be increased or decreased by the amount assessed by the Project Manager based upon the difference, expressed as a percentage, between the rate set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of labour incorporated within the amount of Work remaining to be executed at the date of publication of such increase or decrease.
- (iii) No adjustment shall be made in respect of changes in the rates of wages and other emoluments and expenses which occur after the date of Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

25.4 The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the basic prices of materials to be permanently incorporated in the Works as determined by the J.B.C. and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.

25.5 Upon the J.B.C. determining that any of the said basic prices are increased or decreased then the Contract Price shall be increased or decreased by the amount to be assessed by the Project Manager based upon the difference between the price set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of the relevant materials which have not been taken into account in arriving at the amount of any interim certificate under clause 23 of these Conditions issued before the date of publication of such increase or decrease.

25.6 No adjustment shall be made in respect of changes in basic prices of materials which occur after the date for Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

- 25.7 The provisions of sub-clause 25.1 to 25.2 herein shall not apply in respect of any materials included in the schedule of basic rates.

26. Retention

- 26.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Appendix to Conditions of Contract until Completion of the whole of the Works. On Completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and the remaining half when the Defects Liability Period has passed and the Project Manager has certified that all defects notified to the Contractor before the end of this period have been corrected.

27. Liquidated Damages

- 27.1 The Contractor shall pay liquidated damages to the Employer at the rate stated in the Appendix to Conditions of Contract for each day that the actual Completion Date is later than the Intended Completion Date. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not alter the Contractor's liabilities.
- 27.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rate specified in Clause 23.30.

28. Securities

- 28.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a reputable bank acceptable to the Employer, and denominated in Kenya Shillings. The Performance Security shall be valid until a date 30 days beyond the date of issue of the Certificate of Completion.

29. Day-works

- 29.1 If applicable, the Day-works rates in the Contractor's tender shall be used for small additional amounts of Work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 29.2 All work to be paid for as Day-works shall be recorded by the Contractor on Forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the Work being done.

- 29.3 The Contractor shall be paid for Day-works subject to obtaining signed Day-works forms.

30. Liability and Insurance

- 30.1 From the Start Date until the Defects Correction Certificate has been issued, the following are the Employer's risks:
- (a) The risk of personal injury, death or loss of or damage to property (excluding the Works, Plant, Materials and Equipment), which are due to;
 - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or
 - (ii) negligence, breach of statutory duty or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
 - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in Employer's design, or due to war or radioactive contamination directly affecting the place where the Works are being executed.
- 30.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is the Employer's risk except loss or damage due to;
- (a) a defect which existed on or before the Completion Date.
 - (b) an event occurring before the Completion Date, which was not itself the Employer's risk
 - (c) the activities of the Contractor on the Site after the Completion Date.
- 30.3 From the Start Date until the Defects Correction Certificate has been issued, the risks of personal injury, death and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risk are Contractor's risks.
- 30.4 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts stated in the Appendix to Conditions of Contract for the following events;
- (a) loss of or damage to the Works, Plant, and Materials;
 - (b) loss of or damage to Equipment;
 - (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract, and

(d) personal injury or death.

30.5 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation required to rectify the loss or damage incurred.

30.6 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

30.7 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager. Both parties shall comply with any conditions of insurance policies.

31. Completion and taking over

31.1 Upon deciding that the Works are complete, the Contractor shall issue a written request to the Project Manager to issue a Certificate of Completion of the Works. The Employer shall take over the Site and the Works within seven [7] days of the Project Manager's issuing a Certificate of Completion.

32. Final Account

32.1 The Contractor shall issue the Project Manager with a detailed account of the total amount that the Contractor considers payable to him by the Employer under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects 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 Project Manager shall issue within 30 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 Project Manager shall decide on the amount payable to the Contractor and issue a Payment Certificate. The Employer shall pay the Contractor the amount due in the Final Certificate within 60 days.

33. Termination

33.1 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 30 days when no stoppage of work is shown on the current program and the stoppage has not been authorised by the Project Manager;

- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
 - (c) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate) of issue.
 - (e) the Project Manager gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
 - (f) the Contractor does not maintain a security, which is required.
- 33.2 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Clause 33.1 above, the Project Manager shall decide whether the breach is fundamental or not.
- 33.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 33.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible. The Project Manager 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.

34. Payment Upon Termination

- 34.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the Work done and materials ordered and delivered to Site up to the date of the issue of the certificate. Additional liquidated damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable by the Contractor.
- 34.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the Work done, materials ordered, the reasonable cost of removal of equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works.

- 34.3 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 the Site, plant, equipment and temporary works.
- 34.4 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 Project Manager may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to or hired by him, and in default 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.
- 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 Project Manager 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.

35. Release from Performance

- 35.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop Work as quickly as possible after receiving this certificate and shall be paid for all Work carried out before receiving it.

36. Corrupt gifts and payments of commission

The Contractor shall not;

- (a) Offer or give or agree to give to any person in the service of the Employer any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract for the Employer.
- (b) Enter into this or any other contract with the Employer in connection with which commission has been paid or agreed to be paid by him or on his

behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement Regulations issued under The Exchequer and Audit Act Cap 412 of the Laws of Kenya.

37. Settlement of Disputes

37.1 In case any dispute or difference shall arise between the Employer or the Project Manager on his behalf and the Contractor, either during the progress or after the completion or termination of the Works, such dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred 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 or Vice Chairman of any of the following professional institutions;

- (i) Architectural Association of Kenya
- (ii) Institute of Quantity Surveyors of Kenya
- (iii) Association of Consulting Engineers of Kenya
- (iv) Chartered Institute of Arbitrators (Kenya Branch)
- (v) Institution of Engineers of Kenya

On the request of the applying party. The institution written to first by the aggrieved party shall take precedence over all other institutions.

37.2 The arbitration may be on the construction of this Contract or on any matter or thing of whatsoever nature arising thereunder or in connection therewith, including any matter or thing left by this Contract to the discretion of the Project Manager, or the withholding by the Project Manager of any certificate to which the Contractor may claim to be entitled to or the measurement and valuation referred to in clause 23.0 of these conditions, or the rights and liabilities of the parties subsequent to the termination of Contract.

37.3 Provided that no arbitration proceedings shall be commenced on any dispute or difference where notice of a dispute or difference has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

- 37.4 Notwithstanding the issue of a notice as stated above, the arbitration of such a dispute or difference shall not commence unless an attempt has in the first instance been made by the parties to settle such dispute or difference amicably with or without the assistance of third parties. Proof of such attempt shall be required.
- 37.5 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:
- 37.5.1 The appointment of a replacement Project Manager upon the said person ceasing to act.
- 37.5.2 Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- 37.5.3 Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- 37.5.4 Any dispute or difference arising in respect of war risks or war damage.
- 37.6 All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Employer and the Contractor agree otherwise in writing.
- 37.7 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.
- 37.8 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.
- 37.9 The award of such Arbitrator shall be final and binding upon the parties.

SECTION V: APPENDIX TO CONDITIONS OF CONTRACT

The following information regarding the particulars of the tender shall complement supplement or amend the provisions of the instructions to conditions of contract. Wherever there is a conflict between the provision of the instructions to conditions of contract and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the conditions of contract.

COC Clause Number	Amendments of, and Supplements to, Clauses in the conditions of contract
1	<p>Definitions:</p> <p>The Employer is:</p> <p>Name: COUNTY GOVERNMENT OF KIRINYAGA Address: P.O BOX 260 -10304, KUTUS Name of Authorized Representative: CHIEF OFFICER, COUNTY DEPARTMENT OF EDUCATION AND PUBLIC SERVICE, KIRINYAGA COUNTY. Telephone: Email:</p> <p>The Project Manager is:</p> <p>Name: DIRECTOR OF ROADS, COUNTY DEPARTMENT OF TRANSPORT, ROADS AND PUBLIC WORKS, KIRINYAGA COUNTY. Address: P.O BOX 390 KERUGOYA Telephone: 020 215 3369/ 0789 218 976 Email: kirinyagacountyworks@gmail.com</p> <p>The name (and identification number) of the Contract is:</p> <p>THE PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</p> <p>The Start Date:</p> <p>Shall be AGREED WITH THE PROJECT MANAGER</p>
2.1	The Completion Period for the Works is 15 WEEKS
13.1	The Contractor shall submit a revised program for the Works within 7 days of delivery of the Letter of Acceptance.
13.2	The period between Program updates is 30 days.

13.3	The amount to be withheld for late submission of an updated Program is Kshs “Full Certificate”
14.1	The Site Possession Date shall be AGREED WITH THE PROJECT MANAGER
15.1	The Site is located at KIAMWATHI YOUTH POLYTECHNIC, KIRINYAGA COUNTY
20.2	The Defects Liability period is 180 days from the date of Practical Completion.
25.4	The Price Adjustment Clause SHALL NOT apply
26.1	The proportion of payments retained is 10% . Limit of retention is 10% of contract sum.
27.1	The liquidated damages for the whole of the Works is Kshs. 0.05% of the Contract Sum per day
28.1	The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price 10 percent (%)
30.4	<p>The minimum insurance covers shall be;</p> <ul style="list-style-type: none"> • Contractor’s ALL RISK INSURANCE <ol style="list-style-type: none"> 1. The minimum cover for insurance of the Works and of Plant and Materials in respect of contractor’s faulty design is N/A 2. The minimum cover for loss or damage to Equipment is N/A 3. The minimum for insurance of other property is N/A 4. The minimum cover for personal injury or death insurance <ul style="list-style-type: none"> • For the Contractor’s employees is Kshs 10,000,000 (Ten Million) • And for other people is Kshs 10,000,000 (Ten Million)
2.14.1	Dully filled Tender Securing Declaration Form in format provided.
2.15.1	The Tender validity period shall be 120 days .
2.16.2	The number of copies of the Tender to be completed and returned shall be: One (1) original and two (2) copies .
2.17.2	<p>Tender shall be submitted to:</p> <p>The Head Supply Chain Management, County Government of Kirinyaga,</p>

	P.O. Box 260 – 10304, Kutus.
2.20.1	The Tender opening shall take place at: Kirinyaga County Headquarters, 3 rd floor, Conference Room. Date: Friday 2nd November, 2018 Time: 11.00am local time.
2.22	The Preliminary evaluation shall be mandatory: The evaluation shall adopt YES/ No Approach. The non-responsive submissions will be eliminated from the entire preliminary evaluation process and will not be considered further. Bidders must submit the following documents and Must be certified (signed and stamped) by commissioner of oaths/advocate registered in Kenya: <ul style="list-style-type: none"> • Valid current year business permit. • Valid current Tax Compliance Certificate. • Valid AGPO Certificate • Certificate of incorporation. • CR 12 Certificate/ Form • NCA Building works-category 6 and above. • PIN/VAT certificate from KRA • Bank statements for the last One year • Lines of credit letter(s) from banks • Financial audited accounts for two (2) previous year endorsed, signed and stamped by a registered external auditor. • Copies of Academic/ Professional Certificates • Copies of Assets Ownership documents eg. Log books, Lease agreements, Titles, etc <p>AT THIS STAGE, THE TENDERER’S SUBMISSION WILL EITHER BE RESPONSIVE OR NON RESPONSIVE. THE NON RESPONSIVE SUBMISSIONS WILL BE ELIMINATED FROM THE ENTIRE EVALUATION PROCESS AND WILL NOT BE CONSIDERED FURTHER.</p>
2.24	Evaluation and Comparison of Tenders (Technical Evaluation) <ul style="list-style-type: none"> • Shall be as per evaluation criteria provided below. • All tender responses will be evaluated, and the winning tender selected on the basis of “best value” in terms of technical superiority as well as cost effectiveness. • A tenderer must score a minimum of 70% to be considered for price comparison.
2.27	Post – qualification: Shall be undertaken
2.24.3	Award Criteria: Proposals will be awarded according to their combined technical (St) and financial (Sf) scores
2.30.1	Particulars of performance security if applicable.- 10% of the contract sum from a reputable financial institution

SECTION VI - STANDARD FORMS

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FORM OF POWER OF ATTORNEY

(All bidders shall complete this form otherwise; their bids shall be considered as non-responsive)

We _____ (Name of Bidder)

having our offices located in _____ (Name of Town and Building) duly authorise

_____ (Name of person appointed to act for and on behalf of the bidder) to act for and on our behalf on all matters pertaining to the execution of works as stipulated under

Tender No: CGK/SCM/EDU&PS/OT/008/2018-2019

Tender Description: THE PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC, KIRINYAGA COUNTY

Duly signed and delivered:

Name of appointed attorney: _____

Signature of appointed attorney: _____

Witnessed by:

1. Name of First Company Director: _____

Signature: _____

2. Name of Second Company Director: _____

Signature: _____

Company Seal:

____ Name and Title

FORM OF TENDER

Office of the County Secretary,
County Government of Kirinyaga,
P.O. Box 260 - 10304
KUTUS

Date: , 2018

Dear Sir,

REF: FOR THE PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO-TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC, KIRINYAGA COUNTY

In accordance with the Instructions to Tenderers, Conditions of Bid, Specifications and Bills of Quantities for the execution of the above named works, we, the undersigned offer to perform the works and remedy any defects therein for the sum of:

Kshs.....*[Amount in figures]*

KenyaShillings.....
.....
... *[Amount in words]*

We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer’s Representative’s 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.

We agree to abide by this tender for **a period of 120 days from the date of bid opening** and shall remain binding upon us and may be accepted at any time before that date.

Unless and until a formal Agreement is prepared and executed this bid together with your written acceptance thereof, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this day of20.....

Signaturein the capacity of
.....

duly authorized to sign tenders for and on behalf of:

.....
..... **[Name of Bidder]**

Of.....
..... **[Address of Bidder]**

PIN No.
.....
.....

VAT CERTIFICATE No.
.....

Witness: Name
.....

Address
.....

Signature
.....

LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To: _____

RE: Tender No. _____

Tender Name _____

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

1. Please acknowledge receipt of this letter of notification signifying your acceptance.
2. The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.
3. You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS) _____

SIGNED FOR ACCOUNTING OFFICER

LETTER OF ACCEPTANCE

_____ [date]

To: _____
 [*name of the Contractor*]

 [*address of the Contractor*]

Dear Sir,

This is to notify you that your Tender dated _____
for the execution of _____
[*name of the Contract and identification number, as given in the Tender documents*]
for the Contract Price of Kshs. _____ [amount in figures]
[Kenya Shillings _____ (amount in words)] in
accordance with the Instructions to Tenderers is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in
accordance with the Contract documents.

Authorized Signature

Name and Title of Signatory

Attachment : Agreement

CONTRACT AGREEMENT

THIS AGREEMENT made the ___day of _____20___ between.....[name of procurement entity] of[country of Procurement entity](hereinafter called "the Procuring entity") of the one part and[name of tenderer] of[city and country of tenderer](hereinafter called "the tenderer") of the other part.

WHEREAS the procuring entity invited tenders for certain materials and spares. Viz..... [Brief description of materials and spares] and has accepted a tender by the tenderer for the supply of those materials and spares in the sum of [Contract price in words and figures]

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 referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Tender Form and the Price Schedule submitted by the tenderer;
 - (b) the Schedule of Requirements;
 - (c) the Details of Cover;
 - (d) the General Conditions of Contract;
 - (e) the Special Conditions of Contract; and
 - (f) the Procuring entity's Notification of Award.
3. In consideration of the payments to be made by the Procuring entity to the tenderer as hereinafter mentioned, the tenderer hereby covenants with the Procuring entity to provide the materials and spares and to remedy defects therein in conformity in all respects with the provisions of the Contract
4. The Procuring entity hereby covenants to pay the tenderer in consideration of the provision of the materials and spares and the remedying of defects therein, the Contract Price or such other sum 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 hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the _____ (for the Procuring entity)

Signed, sealed, delivered by _____ the _____ (for the tenderer)

CONFIDENTIAL BUSINESS QUESTIONNAIRE

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

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

<i>Part I- General :</i>	
Business Name
Location of business premises.....
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 one time : K£.....
Name of your bankers.....	Branch

<input type="checkbox"/>	Part 2 (a) – Sole Proprietor																								
	Your name in full.....Age..... Nationality.....Country of origin..... *Citizenship details.....																								
	Part 2 (b) Partnership																								
<input type="checkbox"/>	Given details of partners as follows:																								
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<input type="checkbox"/>	Part 2 (c) – Registered Company:																								
	Private or Public..... State the nominal and issued capital of company- Nominal K£..... Issued K£..... Given details of all directors as follows:-																								
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5.																						
DateSignature of Candidate.....																									

*if Kenya Citizen, indicate under "Citizenship Details" whether by Birth, Naturalization or Registration.

TENDER SECURITY (BANK GUARANTEE)

Bank Letterhead

Whereas [name of the tenderer] (hereinafter called "the tenderer") has submitted its tender dated [date of submission of tender] for the supply, installation and commissioning of [name and/or description of the equipment] (hereinafter called "the Tender")
..... KNOW ALL PEOPLE by these presents that WE
..... of having our registered office at
..... (hereinafter called "the Bank/Insurance Company"), are bound unto
..... [name of Procuring entity] (hereinafter called "the Procuring entity") in the sum of for which payment well and truly to be made to the said Procuring entity, the Bank/Insurance Company binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank/Insurance Company this _____

_____ day of _____ 20 _____.

THE CONDITIONS of this obligation are:-

1. If the tenderer withdraws its Tender during the period of tender validity specified by the tenderer on the Tender Form; or
2. If the tenderer, having been notified of the acceptance of its Tender by the Procuring entity during the period of tender validity:
 - (a) fails or refuses to execute the Contract Form, 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 Procuring entity up to the above amount upon receipt of its first written demand, without the Procuring entity having to substantiate its demand, provided that in its demand the Procuring Entity will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This tender guarantee will remain in force up to 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 above date.

[signature of the authorized representative of the bank/insurance company].....

Seal_____

PERFORMANCE SECURITY FORM

To:

[name of the Procuring entity]

WHEREAS.....[name of tenderer]

(hereinafter called "the tenderer") has undertaken, in pursuance of Contract No. _____ [reference number of the contract] dated _____ 20 ____ to

supply.....

[Description services](Hereinafter called "the contract")

AND WHEREAS it has been stipulated by you in the said Contract that the tenderer shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Tenderer's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the tenderer a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the tenderer, up to a total of
[amount of the guarantee in words and figures],

and we undertake to pay you, upon your first written demand declaring the tenderer to be in default under the Contract and without cavil or argument, any sum or sums within the limits of
[amount of guarantee] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the ____ day of 20

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]

INSURANCE AUTHORIZATION FORM

To [name of the Procuring entity]

WHEREAS

[Name of the principal]
who are established and reputation dealers in *[Type of business]* having registered offices at *[Address of principal]* do hereby authorizing *[Name and address of tenderer]* to submit a tender/act on behalf of *[Name of Insurance]*, *[reference of the tender]* for the stated (*particulars of tender*).

We hereby extend our full guarantee and warranty as per the General Conditions of Contract for the services to be provided against this Invitation for Tenders.

[Signature for and on behalf of the principal]

Note: This letter of authority should be on the letterhead of the principal and should be duly signed and stamped.

TENDER QUESTIONNAIRE

Please fill in block letters.

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 tenderer's representative to be contacted on matters of the tender during the tender period
.....
6. Details of tenderer's 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*)

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	Name of client and contact person	Type of work performed and year of completion	Value of Contract	Completion Status

1.4 Major items of Contractor's Equipment proposed for carrying out the Works. List all information requested below.

2

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

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data.

Position	Name	Years of experience (general)	Years of experience in proposed position

Project Manager, etc.			
-----------------------------	--	--	--

- 1.6 Financial reports for the last five years: balance sheets, profit and loss statements, auditor's reports, etc. List below and attach copies.

- 1.7 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.

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

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

- 1.10 Proposed program (work method and schedule) for the whole of the Works.

3 Joint Ventures

- 3.4 The information listed in 1.1 – 1.10 above shall be provided for each partner of the joint venture.
- 3.5 The information required in 1.11 above shall be provided for the joint venture.
- 3.6 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture
- 3.7 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.

DETAILS OF DOMESTIC SUB-CONTRACTORS

If the Tenderer wishes to sublet any portions 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-contractor's experience
of similar works carried out
in the last 3 years with
Contract value:

(2) Portion of Works to sublet:

.....

(i) Full name of sub-contractor
and address of head office:

.....

.....

(ii) Sub-contractor's experience
of similar works carried out
in the last 3 years with
contract value:

[Signature of Tenderer)

Date

TENDER SECURING DECLARATION FORM

[The Bidder shall fill in this Form in accordance with the instructions indicated]

Date: [insert date (as day, month and year) of Bid Submission]

Tender

No..... To:

County Government of Kirinyaga

We, the undersigned, declare that:

1. We understand that, according to your conditions, bids must be supported by a Tender Securing Declaration.
2. We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we:
 - (a) have withdrawn our Bid during the period of bid validity specified by us in the Bidding Data Sheet; or
 - (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Tenderers.
3. We understand this Tender Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.
4. We understand that if we are a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid. If the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:[insert signature of person whose name and capacity are shown] In the capacity of [insert legal capacity of person signing the Bid Securing Declaration]

Name:[insert complete name of person signing the Tender Securing Declaration]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing.

FORM SD1

SELF DECLARATION FORMS (r 62)

REPUBLIC OF KENYA

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA)

SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015.

I,of P. O. Box being a resident of in the Republic of ----- do hereby make a statement as follows:-

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of (insert name of the Company) who is a Bidder in respect of **Tender No.** for(insert tender title/description) for(insert name of the Procuring entity) and duly authorized and competent to make this statement.

2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.

3. THAT what is deponed to hereinabove is true to the best of my knowledge, information and belief.

.....
(Title) (Signature) (Date)

Bidder Official Stamp

Note: This form MUST be filled, signed and submitted by all the bidders participating in this tender. This is a mandatory requirement under the new Public Procurement Asset and Disposal Act 2015 that came into effect on 7th January 2016

FORM SD2

SELF DECLARATION FORMS (r 62)

REPUBLIC OF KENYA

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA)

**SELF DECLARATION THAT THE PERSON/TENDERER WILL NOT ENGAGE
IN ANY CORRUPT OR FRAUDULENT PRACTICE.**

I,of P. O. Box being a resident of in the Republic of ----- do hereby make a statement as follows:-

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of (insert name of the Company) who is a Bidder in respect of **Tender No.** for(insert tender title/description) for(insert name of the Procuring entity) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of(insert name of the Procuring entity) which is the procuring entity.
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of(name of the procuring entity)
4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender
5. THAT what is deponed to hereinabove is true to the best of my knowledge information and belief.

.....
(Title) (Signature) (Date)
Bidder's Official Stamp

Note: This form MUST be filled, signed and submitted by all the bidders participating in this tender. This is a mandatory requirement under the new Public Procurement Asset and Disposal Act 2015 that came into effect on 7th January 2016

FORM RB 1

**REPUBLIC OF KENYA
PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD**

APPLICATION NO.....OF.....20.....

BETWEEN

.....APPLICANT

AND

.....RESPONDENT (*Procuring Entity*)

Request for review of the decision of the..... (*Name of the Procuring Entity*)
ofdated the...day of20.....in the matter of Tender
No.....of20...

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical
address.....Fax No.....Tel. No.....Email, hereby request the
Public Procurement Administrative Review Board to review the whole/part of the
above mentioned decision on the following grounds , namely:-

- 1.
 - 2.
- etc.

By this memorandum, the Applicant requests the Board for an order/orders that: -

- 1.
 - 2.
- etc

SIGNED (Applicant)

Dated on.....day of/...20...

FOR OFFICIAL USE ONLY

Lodged with the Secretary Public Procurement Administrative Review Board on
..... day of20.....

SIGNED
Board Secretary

SECTION VII – SPECIFICATIONS, DRAWINGS & BILLS OF QUANTITIES

STANDARD SPECIFICATIONS

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 Roads, Public Works and Housing.

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A.0 GENERAL ITEMS

A.1 MATERIALS GENERALLY

All materials used on the works shall be new and of the qualities and kinds specified herein and equal to approved samples. Deliveries shall be made sufficiently in advance to enable samples to 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 (K.S.) specification has been published shall conform to the latest edition hereof 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 specifications.

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 Standards specification has been published shall conform to the British Standards (B.S.) 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.

B.0 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 cutting remaining materials 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, murrum, turf, soft rock, boulders or whatever other subsoil is encountered except hard rock as defined below.

B.3 FOUNDATION EXCAVATIONS

The foundation trenches and column bases shall be excavated to 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 measurement 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 drawing or as instructed by the Engineer, then he shall at his own expense fill 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 or 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 FILLING

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 ton smooth wheeled roller or a 2 ton vibrating roller until all movement ceases and 100% California Bearing Ratio (C.B.R.) is obtained.

ii) 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 the termite nests found within the perimeter of the building and within 20 meters 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 back plastic adhesive tapes. The sheeting shall not stretch but shall be laid with sufficient wrinkles to permit shrinkage up to 15%.

The Contractor shall ensure that the membrane is not pierced by laying and concerting.

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 there upon 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.

CONCRETE WORK

C.0 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 B.S. 8110 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.1 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 or a brand and source approved by the Engineer and shall comply with the requirements of K.S.02-21. A manufacturer's 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 to 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 requirement but is dirty or altered in any manner it shall be screened and/or washed in clean water at the Contractor's 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.

C.6 QUALITY CONTROL AT WORKS STAGE

Once the concrete mix is accepted form preliminary to works stage, the principal basis 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 coarse aggregate per 50kg bag of cement	0.12	0.16
Cubic metres of coarse aggregate per 50kg bag of cement	0.24	0.32
Maximum size of coarse aggregate 40mm x 40mm or 20mm for blinding concrete where described.		

Where batching is by volume, approved gauge boxes as 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 maximum shear, viz, vertical at, or near midspans of slabs, ribs and deems.

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 batch; 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 instruction. On no account shall any faulty, honeycombed, or otherwise defective concrete be repaired or patched until the Engineer has inspected and issued instructions for the repair.

C.10 STEEL REINFORCEMENT

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

Hot rolled MS for the Reinforcement Concrete
KS 02-22

Hot rolled MS for the Reinforcement Concrete
KS 4449

Cold worked H.Y. steel for the reinforcement concrete
BS 4461

Hard drawn steel wire
BS 4482

C.11 FABRIC REINFORCEMENT

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 FIXING STEEL REINFORCEMENT

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 detailed or directed by the Engineer.

C.13 FORMWORK

The method and system of formwork which the Contractor proposes 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 materials.

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.

D. WALLING

D.0 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 B.S. 890 Class A for non-hydraulic lime. The lime can be run to putty in an approved lined pit or container. The water to be first run into the pit or container and the 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 sharp hard 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 if so directed by the Architect.

D.4 WATER

Shall be as described in Concrete work.

D.5 STONE

All stones shall comply with the requirement 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 unbound leaves of wall.

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 unbound 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.

E. GLAZING

E.0 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.

F. METALWORK

F.0 MATERIALS

F.1 GENERALLY

All materials shall be the best of their respective kinds free from defects and all work is to be carried out in the most workmanlike manner and strictly as directed by an 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

Stainless steel tube shall be Austenic steel B.S. comparable to B.S. 1449 Type 316 S 16\.

F.7 STEEL GRILLES

Steel grilles shall be manufactured from section conforming to B.S.990 of heavy duty sections of the metric W20 range of approved manufacture 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.

WORKMANSHIP

F.8 WELDING

All welding is to be in accordance with the requirements of B.S 1856 and 938 and 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 Architect's 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.

G. FLOOR, WALL AND CEILING FINISHING

G.0 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. 02-21. 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.

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 BEDS AND BACKINGS

Screeded beds for in-situ finishings of floor finishings bedded in mortar shall be left rough from the screeding board. Floated beds for inflexible floor finishing 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. Screeded backings for in-situ wall finishings or wall finishings bedded in mortar shall be scratched for key. Floated backings for inflexible 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 finishing in this section shall be thoroughly cleaned. Screeds to receive finishing bedded in mortar shall be well wetted before laying is commenced.

H. PAINTING AND DECORATING

H.0 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 event 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 SAME 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 makers' 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 BLACK BITUMINOUS PAINT

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

H.20 PRIMER FOR IRON AND STEELWORK

Primer for iron and steelwork shall be:-

- i) Lead based priming paint complying with B.S. 2523, Type B.
- ii) 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 BLOCK WORK 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 fireboard surfaces. After priming all nail holes and other imperfections shall be stopped.

H.39 PLYWOOD

Surfaces of plywood to 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 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 50sq.m. 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 MANUFACTURER'S 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.

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 as described, and if permission is granted, such application shall not result in extra cost to the Employer.

DRAWINGS

Note 1. The tender drawings including Site plans should be annexed in a separate booklet and issued
To bidders during the Pre-Tender Site meeting.

GENERAL SPECIFICATIONS OF MATERIALS AND WORKS FOR ELECTRICAL 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 Regulations 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 Earthing
- 2.16 Cables and Flexible Cords
- 2.17 Armoured PVC Insulated and Sheathed Cables
- 2.18 Cable Supports; Markers and Tiles
- 2.19 PVC Insulated Cables
- 2.20 Heat Resisting Cables
- 2.21 Flexible Cords

- 2.22 Cable Ends and phase Colours
- 2.23 Cable Insulation Colours
- 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 Lampholders
- 2.33 Lamps
- 2.34 lighting Fittings Street lighting Lanterns
- 2.35 Position of Points and Switches
- 2.36 Street/Security Lighting Columns
- 2.37 Timing Control Switch
- 2.38 Wiring System for Street Lighting
- 2.39 Metal control Pillar
- 2.40 Current Operated Earth leakage circuit breaker
- 2.41 MV Switchboard
- 2.42 Steel Conduits and Steel Trunking
- 2.43 Testing on Site

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 may be 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.

2.1 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 section.

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

2.2 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.

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.

2.3 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 cables must be agreed on site with the Engineer before any work is carried out.

2.4 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 moulded plastic with the tripping mechanism and arc chambers separated and sealed from the cable terminals.

The operating dolly shall be tripfree with a positive 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: Ivorine labels shall be secured to the insulation barriers in such a manner as to indicate the number of the 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 earth bars when installed.

2.5 FUSED SWITCHGEAR AND ISOLATORS

All fused switchgear and isolators whether mounted on machinery, walls or industrial panels shall conform to the requirements of KS 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 : 1978.

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 isolators shall be clearly indicated by a mechanical flag indicator or similar device. In T.P & N fused switch units, bolted neutral links are to be fitted.

2.6 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 KS 04 – 179: 1988 and IEE Regulations. No conduit 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'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 conduits 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 complete 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 or non-screwed boxes, care shall be taken that no rough edges of conduit stick out into the boxes.

Runs between draw in boxes are not to have more than two right angle bends or their equivalent. The sub-contractor may be required to demonstrate to the Engineers that wiring in any particular run is easily withdrawable and the sub-contractor may, at no extra cost to the contract; be required to install additional draw-in boxes required. If conduit is installed in straight runs in excess of 6000mm, expansion couplings as manufactured by Eatable shall be used at intervals of 6000mm.

Where conduit runs are to be concealed in pillars and beams, the approval of the Structural Engineer, shall be obtained. The sub-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 and 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 expense.

It will be the Sub-contractor's responsibility to ascertain from site, the 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 steelwork may be drilled without first obtaining the written permission of the Structural Engineer.

The drawings provided with these specifications indicate the appropriate positions 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 the 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 KS 04 – 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 conduits 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 enamelled or galvanised 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 2 BA brass roundhead screws; No adaptable box shall be less than 75mm x 75mm x 50mm or larger than 300mm x 300mm x 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 Ivorine 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 switches
 - b) Special current rating
 - c) Item of equipment controlled
- (iv) Shall indicate on MCB panels
 - a) Reference number
 - b) Type of board, i.e., lighting, sockets, etc.,
 - c) Size of cable supplying panel
 - d) where to isolate feeder cable
- (v) Shall be generally not less than 75mm x 50mm.

2.15 EARTHING

The earthing of the installation shall comply with the following requirements;-

- (i) It shall be carried out in accordance with the appropriate sections of the current edition of the Regulations, for the Electrical Equipment of Buildings issued by Institute of Electrical Engineers of Great Britain.
- (ii) At all main distribution panels and main service positions a 25mm x 3mm minimum cross-sectional area Copper tape shall be provided and all equipment including the lead sheath and armouring of cables, distribution boards and metal frames 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., it 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.
- (vi) Earthing 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.
- (vii) Where an earth rod is specified (see Sub-clause (iii)) it shall be proprietary manufacture, solid hand drawn copper of 15mm diameter driven into the ground to a minimum depth of 3.6m . It shall be made up to 1.2m sections with internal screw and socket joints and fitted with hardened steel tip and driving cap.
- (viii) Earth plates will not be permitted
- (ix) Where an earth rod is used the earth resistance shall be tested in the manner described in the current edition of the IEE Regulations, by the Sub-Contractor in the presence of the Engineer and the Sub-Contractor shall be responsible for the supply of all test equipment.
- (x) Where copper tape is fixed to the building structure it shall be by means of purpose made non-ferrous saddles which space the conductor away from the structure a minimum distance of 20mm. Fixings, shall be made using purpose made plugs; No fixings requiring holes to be drilled through the tape will be accepted.
- (xi) Joints in copper tape shall be tinned before assembly riveted with a minimum of two copper rivets and seated solid.

- (xii) Where holes are drilled in the earth tape for connection to items of equipment the effective cross sectional area must not be less than required to comply with the IEE regulations.
- (xiii) Bolts, nuts and washers for any fixing to the earth tape must be of non-ferrous material.
- (xiv) 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 shall be manufactured in accordance with the current appropriate Kenya standard Specification which are as follows:-

P.V.C. Insulated Cables and Flexible Cords 192:1988	-	Ks 04-
PVC Insulated Armoured Cables 194:1990	-	Ks 04-
Armouring of Electric cables 290:1987	-	Ks 04-

The successful Sub-Contractor will, at the Engineers discretion be required to submit samples of cables for the Engineers approval; the Engineer 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 500/1000 volt grade. No cables smaller than 1.5mm² shall be used unless otherwise specified. The installation and the finish of cables shall be as detailed in later clauses. The colour 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 600/1000 volt grade manufactured to Ks 04-194:1988 and Ks 04-187/188 with copper stranded conductors.

The wire armour of the cable shall be used wholly as an earth continuity conductor and the resistance of the wire armour 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 cable is 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 in rising ducts or on ceilings by means of die cast cables hooks or clamps, or appropriate size to suit cables, fixed by studs and back nuts to their channel sections.

Alternatively, fixing shall be by BICC claw type cleating system with die-cast cleats and galvanised 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 backstraps described above which shall in turn be secured to walls or ceilings of ducts by rawbolts.

In excessively damp or corrosive atmospheric conditions special finishes may be required and the Sub-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 blackstraps 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 methods 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 shall work in close liaison with other services Sub-contractors.

The Sub-Contractor shall include for the provision of fixing of approved type coloured slip on cables end markers to indicate permanently the correct phase and neutral colours 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 laid over which shall be provided and laid under this Sub-contract.

All necessary excavations and reinstatement of ground including sanding or trenches will be carried out by the Sub-Contractor, unless otherwise stated.

2.19 PVC INSULATED CABLES

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

PVC cables shall conform to the details of the “Cables and Flexible cords” and “Cable Braid and Insulation Colours” clauses.

2.20 HEAT RESISTING CABLES

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

This type of cable shall be used in all instances where a temperature exceeding 100°F, but not exceeding 150°F is likely to be experienced. Final connections to all lighting fittings (and other equipment where a temperature in excess of 150°C 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 Cords” clause. No cord shall be less than 24/0.2mm in size unless otherwise specified.

Circular white twin 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 Cables” 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 Hellerman rubber slip on cable end markers.

The markers shall be of appropriate phase colour for switch and all other live feeds to the details of the “Cable Insulation Colours” clause. Black cable with black end markers shall only be used for neutral cables.

2.23 CABLE INSULATION COLOURS

Unless otherwise stated in later clauses the insulation colours shall be in accordance with the following table.

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

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

Main and Sub-Main

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

**1) Sub-Circuits
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 1.5mm² for all lighting circuits indicated on the drawing.

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

- (i) 2.5mm² for one, two or three 5Amp sockets wired in parallel.
- (ii) 2.5mm² for one 15Amp socket.
- (iii) 2.5mm² for maximum of ten switched 13 Amp 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 this specification.

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 lumps, 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 before the installations are handed over.

A report of all tests shall be furnished by the Sub-Contractor 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 alloy boxes and shall be of the gangs ratings and type 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/pvc box and shall be of the gangs and type specified in the drawings.

They shall be 13- Amp, 3-pin, shuttered, switched and as manufactured by "M.K. Electrical Co. Ltd.", or other approved 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 OUTLETS

These shall be flush 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 appropriate 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 skirted 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). The screwed cap of the E.S and G.E.S. holders shall be connected to the neutral.

Where lampholders 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.

2.33 LAMPS

All lamps shall be suitable for normal stated supply voltage and the number and sizes of lamps detailed on the drawings shall be supplied and fixed. The Sub-Contractor must verify the actual supply voltage with the supply authority before ordering the lamps.

Tungsten filament lamps shall be manufactured in accordance with KS 04 – 112:1978 for general service lamps and KS 04 – 307:1985 for lamps other than general services. Tubular fluorescent lamps shall comply with KS 04 – 464:1982

Pearl lamps shall be used in all fittings unless otherwise specified.

2.34 LIGHTING FITTINGS AND STREET LIGHTING LANTERNS

This Sub-Contract shall include for the provision, handling charges, taking the delivery, safe storage, wiring (including internal wiring) assembling and erecting of all lighting fittings shown on the drawings.

All fittings and pendants shall be fixed to the conduit boxes with brass R/H screws. These to be in line with metal finish of fittings. The lighting fittings are detailed for the purpose of establishing a high standard of finish and under no circumstances will substitute fittings be permitted.

In case of rectangular shaped ceiling fittings, the extreme ends of the fittings shall be secured to suitable support in addition to the central conduit box fittings. Supports shall be provided and fixed by the Sub-Contractor.

The whole of the metal work of each lighting fittings shall be effectively bonded to earth. In the case of ball and/or knuckle joints short lengths of flexible cable shall be provided, bonded to the metal work on either side of the joints. If the above provisions are not made by the manufacturers -, the Sub-contractor shall include cost of additional work necessary in his tender. See "Flexible Cords" clause for details of internal wiring of lighting fittings. Minimum size of internal wiring shall be 20/0.20mm (23/0067). Each lighting fitting shall be provided with number type and size of lamps as detailed on the drawings. It is to be noted that some fittings are suspended as shown on the drawings.

Where two or more points are shown adjacent to each other on the drawings, e.g socket outlet and telephone outlet, they shall be lined up vertically or horizontally on the centre lines of the units concerned.

Normally, the units shall be lined up on vertical centre lines, but where it is necessary to mount units at low level they shall be lined up horizontally.

2.35 POSITIONS OF POINTS AND SWITCHES

Although the approximate positions of all points are shown on the drawings, enquiry shall be made as to the exact positions of all M.C.B panels, lighting points, socket outlets etc, before work is actually commenced. The Sub-contractor must approach the Architect with regard to the final layout of all lights on the ceiling and walls.

The Sub-contractor must consult with the Engineer in liaison with the Clerk of Works, or the General Foreman on site regarding the positions of all points before fixing any conduit etc. The Sub-Contractor shall be responsible for all alterations made necessary by the non-compliance with the clause.

2.36 STREET/SECURITY OUTDOOR LIGHTING COLUMNS:

The column shall be at a minimum of 225mm in the ground on 75mm thick concrete foundations and the pole upto 150mm shall be surrounded with concrete. The top bracket and plain section of the columns shall be common to and interchangeable with all brackets with maximum mismatching tolerance of 3mm between any pole and bracket. After manufacture and before erection the columns shall be treated with an approved mordant solution which shall be washed off and the whole allowed to dry. Thereafter, the columns shall be painted with one undercoat and two coats of gloss paint to an approved colour. All columns shall be complete with fused cut-outs.

2.37 TIMING CONTROL SWITCH

These shall be installed where shown on the drawings. Photocell timing control circuits which will operate 'on' with a specified level of darkness and 'off' with a given level of light. The initial adjustment will be done with approval of the Electrical Engineer.

2.38 WIRING SYSTEM FOR STREETLIGHTING

Cables shall be as indicated on the drawings, and shall be laid in a cable trench 450mm deep along the road sides and 600mm deep across the roads and 900mm away from the road kerb or 1500mm away from the edges of the road. 'Loop-in' and 'Loop-out' arrangement shall be used at every pole. Wiring to the lanterns on each pole shall be with 1.5mm² PVC twin insulated and sheathed cable with earth wire shall be laid at least 600mm below the finished road level on a compact bed of murram at least 50mm thick and covered with a concrete surrounded 150mm thick.

2.39 METAL CONTROL PILLAR

These shall be metal clad and fabricated as per contract drawings and specification. The Sub-Contractor shall supply, install, test and commission control pillars including supplying, fixing connecting switchgears as detailed on the appropriate drawings.

2.40 CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER

Current operated earth leakage circuit breaker shall conform to B.S.S. 4293:68 rated at 240 volts D.P. 50 cycles A.C. Mains.

The breaker shall be provided with test switch and fitted in weather proof enclosure for surface mounting. The rated load current and earth fault operating current shall be as specified in the drawings. These shall be as manufactured by Crabtree, Siemens or other equal and approved.

2.41 M.V. SWITCHBOARD AND SWITCHGEAR

The switchboard shall be manufactured in accordance with KS04-226 which co-ordinates the requirements for electrical power switchgear and associated apparatus. It is not intended that this K.S. should cover the requirements for specified apparatus for which separate Kenyan Standard exist. All equipment and material used in the switchboard shall be in accordance with the appropriate Kenya Standard.

The switchboard shall comprise the equipment shown on the drawings together with all current transformers, auxiliary fuses, labels, small wiring and interconnections necessary for the satisfactory operation of the switchboard

Switchboard shall be of the flush fronted, enclosed, metal clad type with full front or rear access as called for in the particular specifications, suitable for indoor use, sectionalized as necessary to facilitate transport and erection. The maximum height of the switchboard is to be approximately 2.0 meters. A suitable connection chamber containing all field terminals shall be provided at the top or bottom of the switchboard as appropriate.

Before manufacture, the Sub-Contractor shall submit to the consulting Engineer for approval of detailed drawings showing the layout, construction and connection of the switchboard.

All bus-bars and bus-bar connections shall consist of high conductivity copper and be provided in accordance with KS 04-226: 1985. The bus-bars shall be clearly marked with the appropriate phase and neutral colours which should be red, yellow, blue for the phases and black for neutral. The bus-bars shall be so arranged in the switchboard that the extensions to the left and right may be made in the future with ease should the need arise.

Small wiring, which will be neatly arranged and cleated, shall be executed in accordance with B.S. 158 and the insulation of the wiring shall be colored according to the phase or neutral connection.

Switches and fuse switches, shall be in strict accordance with KS04-183:1978 Class 2 switches. Means of locking the switch in the "OFF" position shall be provided.

All fuse switches shall comply with KS04-183:1978, PARTS 2 and 3 a fault rating at least equal to the fault rating of the switchboard in which they are installed. Cartridge fuse links to KS 04-183:1978 category A.C. 46, class Q1 and fusing factor not exceeding 1.5 shall be supplied with each fused switch.

Mounting arrangements shall be such that individual complete fuse switches may be disconnected and withdrawn when necessary without extensive dismantling work. When switches are arranged in their formation all necessary horizontal and vertical barriers shall be provided to ensure segregation from adjacent units. Means of locking the switch in the "OFF" position shall be provided.

2.42 STEEL CONDUITS AND STEEL TRUNKING

Conduits shall be of heavy gauge class "B" welded to Standard specification KS 04-180:1985. In no case will conduit smaller than 20mm diameter be used on the works. Conduits installed within buildings shall be black enameled finish except where specified otherwise. Where installed externally or in damp conditions they shall be galvanised. Conduit fittings, accessories or equipment used in conjunction with galvanised conduits shall also be galvanised or otherwise as approved by the service engineer.

Metal trunking shall be fabricated from mild steel of not less than 18 swg. All sections of trunking shall be rigidly fixed together and attached to the framework or fabric or the building at intervals of not less than 1.2m. Joint trunking shall not overhang fixing points by more than 0.5m.

All trunking shall be made electrically continuous by means of 25 x 3mm copper links across each joint and where the trunking is galvanised, the links shall be made by galvanised flat iron strips.

All trunking fittings (i.e. bends, tees, etc) shall leave the main through completely clear of obstructions and continuously open except through walls and floors at which points suitable fire resisting barriers shall be provided as may be necessary. The inner edge of bends and tees shall be chamfered where cables larger than 35mm² are employed.

Where trunking passes through ceilings and walls the cover shall be solidly fixed to 150mm either side of ceilings and floors and 50mm either side of walls.

Screws and bolts securing covers to trunking or sections of covers together shall be arranged so that damage to cables cannot occur either when fixing covers or when installing cables in the trough.

Where trunking is used to connect switchgear or fuseboards, such connections shall be made by trunking fittings manufactured for this purpose and not by multiple conduit couplings.

Where vertical sections of trunking are used which exceed 4.5m in length, staggered tie off points shall be provided at 4.5m intervals to support the weight of cables.

Unless otherwise stated, all trunking systems shall be painted as for conduit.

Where a wiring system incorporates galvanized conduit and trunking, the trunking shall be deemed to be galvanized unless specified otherwise.

The number of cables to be installed in trunking shall be such as to permit easy drawing in without damage to the cables, and shall in no circumstances be such that a space factor of 45% is exceeded.

Conduit and trunking shall be mechanically and electrically continuous. Conduit shall be tightly screwed between the various lengths so that they butt at the socketed joints. The internal edges of conduit and all fittings shall be smooth, free from burrs and other defects. Oil and any other insulating substance shall be removed from the screw threads; where conduits terminate in fuse-gear, distribution boards, adaptable boxes, non-spouted switchboxes, etc., they shall, unless otherwise stated, be connected thereto by means of smooth bore male brass bushes, compression washers and sockets. All exposed threads and abrasions shall be painted using an oil paint for black enamelled tubing and galvanising paint for galvanised tubing immediately after the conduits are erected. All bends and sets shall be made cold without altering the section of the conduit. The inner radius of the bend shall not be less than four (4) times the outside diameter of the conduit. Not more than two right angle bends will be permitted without the interposition of a draw-in-box. Where straight runs of conduit are installed, draw-in-boxes shall be provided at distances not exceeding 15m. No tees, elbows, sleeves, either of inspection or solid type, will be permitted.

Conduit shall be swabbed out prior to drawing in cables, and they shall be laid so as to drain of all condensed moisture without injury to end connections.

Conduits and trunking shall be run at least 150mm clear of hot water and steam pipes, and at least 75mm clear of cold water and other services unless otherwise approved by the services engineer.

All boxes shall conform to KS 04 – 668: 1986, to be of malleable iron, and black enamelled or galvanised according to the type of conduit specified. All accessory boxes shall have threaded brass inserts.

Box lids where required shall be heavy gauge metal, secured by means of zinc plated or cadmium plated steel screws.

All adaptable boxes and lids of the same size shall be interchangeable. Boxes used on surface work are to be tapped or drilled to line up with the conduit fixed in distance type saddles allowing clearance between the conduit and wall without the need for setting the conduit.

Where used in conjunction with mineral insulated copper sheathed cable, galvanised boxes shall be used and painted after erection.

Draw-in boxes in the floors are generally to be avoided but where they are essential they must be grouped in positions approved by the services engineer and covered and by the suitable floor traps, with non-ferrous trays and covers.

The floor trap covers are to be recessed and filled in with a material to match the floor surface.

The Sub-contractor must take full responsibility for the filling in of all covers, but the filling in material will be supplied and the filling carried out by the main building contractor.

Where buried in the ground outside the building the whole of the buried conduit is to be painted with two coats of approved bitumastic composition before covering up.

Where run on the surface, unpainted fittings and joints shall be painted with two coats of oil bound enamel applied to rust and grease free metalwork.

2.43 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 the Electric 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 outlets 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 results 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 regulations 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 services engineer's approval and as specified elsewhere in this specification or in standards and regulations already referred to, all equipment, plant and apparatus forming part of the works and before connecting to any power or other supply and setting to work.

Where such equipment, etc., forms part of or is connected to a 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.

APPENDIX TO GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

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

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

ITEM	DESCRIPTION	AMOUNT - KSHS
	<p data-bbox="248 237 1222 310"><u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI</u></p> <p data-bbox="248 363 730 394"><u>PARTICULAR PRELIMINARIES</u></p> <p data-bbox="183 447 820 478">A <u>PRICING ITEMS OF PRELIMINARIES</u></p> <p data-bbox="248 489 1242 919">Prices SHALL BE INSERTED against items of “Particular and General Preliminaries” in the tenderer’s priced Bills of Quantities. Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminaries. Should he find that fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly. Items for which no price is entered will not be paid for but shall be deemed covered by other rates and prices in these Bills of Quantities. Value Added Tax (V.A.T.) shall be included in the individual prices or rates at the rate of 16%.</p> <p data-bbox="183 982 1169 1014">B <u>DESCRIPTION OF THE WORKS AND SCOPE OF CONTRACT</u></p> <p data-bbox="248 1024 1234 1182">The works to be carried out under this contract involves; Proposed Construction of a 3 No. Classrooms Block and 2 No.Eco-Toilet Blocks at Kiamwathi Youth Polytechnic in Baragwi Ward as described in the Tender Bills of Quantities</p> <p data-bbox="183 1224 560 1255">D <u>LOCATION OF SITE</u></p> <p data-bbox="248 1266 1242 1413">The site of the proposed works is located along Baragwi Ward, Kirinyaga County. The Contractor is advised to visit the site to familiarize with the nature and position of the site. No claims arising from the Contractor’s failure to do so will be entertained.</p> <p data-bbox="183 1476 527 1507">C <u>MEASUREMENTS</u></p> <p data-bbox="248 1518 1226 1791">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 be referred to the PROJECT MANAGER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>TENDER DOCUMENTS</u> Tender documents are as listed in Clause 2.1 of the Instruction to Tenderer's Page STD/8</p>	
B	<p><u>VIEWING OF DRAWINGS</u> Any tenderer interested in viewing the drawings related to this project before submission of the tenders may do so by contacting the Director of Public Works, County Department of Transport and Infrastructure Head Office, Prisons Road, Kerugoya.</p>	
C	<p><u>PRICING RATES</u> The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, taxes, and all other incidental expenses, all to comply with the said Conditions of Contract.</p>	
D	<p><u>FIRM PRICE CONTRACT</u> This is a firm price contract and, therefore the tenderer shall not be reimbursed for any increases in the costs of materials and/or labour in the execution of the works except as provided under the fluctuations clause.</p>	
E	<p><u>VALUE ADDED TAX</u> The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st September, 1993 which requires payment of VAT on all contracts. The contractor should therefore include allowance for V.A.T and other Government taxes currently in force for all his rates, provisional items and prime cost sums in this tender. The tenderer is advised that in accordance with Government public notice No 35 & 36 Dated 11th September 2003 operational from 1st October 2003, VAT will be deducted against the contract sum at the prevailing rate by the Employer and remitted directly to the Commissioner of VAT through all interim certificates. It should however be noted that this is not additional tax but a new mode of payment for VAT, any excess payment will be refundable once the Contractor has submitted monthly returns to the Commissioner of VAT who will do the refunds when satisfied that the VAT regulations have been complied with. NB: The tenderers shall allow for for 16% V.A.T. in their rates</p>	
F	<p><u>STANDARD FORMS</u> Any tender with standard forms not filled as appropriate will be treated as non responsive.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>DELIVERY OF TENDER</u> Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited in the tender box as specified in the tender advertisement and or letter of invitation to tender.</p> <p>Tenders will be opened at the time specified in the advertisement and/or letter of invitation to tender. Tenders arriving later than the specified time will not be considered.</p>	
B	<p><u>CORRECTION OF ERRORS IN TENDER</u> Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail.</p>	
C	<p><u>BID SECURITY</u> The Bidder shall furnish, as part of his bid, a security as specified in the tender advertisement or letter of invitation to tender. The bid security shall, at the bidder's option, be in the form of a certified cheque, bank draft, standby letter of credit or guarantee duly signed, sealed and stamped from a bank or Insurance company which has been determined by the bidder to be acceptable to the Government. The format of the bid security shall be in accordance with the sample forms of bid security included in the post qualification forms, other formats may be permitted, subject to the prior approval of the Government. Bid Security shall be valid for a period of Thirty (30) days beyond the tender validity period.</p>	
D	<p><u>TENDER VALIDITY</u> "Clause 3.6 of the Instructions to Tenderers has been amended to read: "Tenders shall remain valid for a period of Ninety (90) days from the date of Tender Opening. All Tenderers are advised to note this amendment when filling the Form of Tender".</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>PERFORMANCE BOND</u> A bond of 5% of the contract sum will be required in accordance with Clause 28 on award of contract of the Instructions to Tenderer's. No payment on account for the works executed will be made to the contractor until he has submitted valid Performance Bond to the EMPLOYER duly signed, sealed and stamped from an approved Bank or Insurance Company.</p>	
B	<p><u>CONTRACT COMPLETION PERIOD</u> The contract completion period in accordance with condition 31 of the Conditions of contract must be adhered to. 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. 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</p>	
C	<p><u>URGENCY OF THE WORKS</u> The Contractor is notified that these “ works are urgent” and should be completed within the period stated in Contract Agreement. The Contractor shall allow in his rates for any costs he/ she deems that he/she may incur by having to complete these works within the stipulated contract period.</p>	
D	<p><u>PROGRESS CHART.</u> The Contractor shall provide within two weeks of Possession of Site and in agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	
E	<p><u>INSURANCE</u> The Contractor shall insure as required in Condition No.30 of the Conditions of 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 Clause have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that the premiums are duly paid up by the Contractor, who, if called upon to do so, shall produce receipted premium renewals for the PROJECT MANAGER's inspection.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>WORKING CONDITIONS</u> The Contractor shall allow in his rates for any interference that he may encounter in the course 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, as the offices will be operational as usual during the course of the contract.</p>	
B	<p><u>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</u> The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client. The Contractor shall allow in his rates any expense he deems necessary by taking such care within the site.</p>	
C	<p><u>EXISTING BUILDINGS AND SERVICES</u> Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.</p>	
D	<p><u>ADJOINING PROPERTY</u> The contractor is advised to take all necessary precautions to prevent damage to adjoining property. Any damage occurring must be made good to the satisfaction of the PROJECT MANAGER and/or owner(s) of the adjoining property at the contractor's expense.</p>	
E	<p><u>LABOUR CAMPS</u> 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.</p>	
F	<p><u>NCA, NEMA, WELFARE, OCCUPATIONAL HEALTH AND SAFETY STATUTORY REQUIREMENTS</u> The Contractor must take all necessary measures to ensure total compliance in all respects with the current statutory requirements in relation to the National Construction Authority, National Environment Management Authority, Public/ Occupational Health and Safety and Staff / Workers Welfare during the both the contract and defects liability periods.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>HOARDING</u> The Contractor shall enclose all the site under construction with a hoarding 2400 mm high consisting of iron sheets gauge 30 on 100 x 50 mm 2nd grade treated sawn cypress timber posts firmly secured at 1800 mm centres with two 75 x 50 mm 2nd grade treated sawn cypress timber rails. 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 the site.</p> <p>Advertisements shall not be displayed on the hoarding unless the prior permission of the PROJECT MANAGER in writing has been obtained.</p>	
B	<p><u>USE OF SITE</u> The contractor shall not use the site for any other purpose other than carrying out the contract works.</p>	
C	<p><u>PAYMENTS</u> The tenderer's attention is drawn to the fact that the COUNTY GOVERNMENT SHALL NOT MAKE ANY ADVANCE PAYMENTS. Payments are shall only be made for work done and materials delivered to site: all in accordance with Clause 23 of the Conditions of Contract Agreement. In order to facilitate this, a list of the general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said</p>	
D	<p><u>PAYMENT FOR MATERIALS ON SITE</u> All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the PROJECT MANAGER. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>	
E	<p><u>CLAIMS</u> It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and / or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such a claim or intent to claim notice to the PROJECT MANAGER in accordance with Clauses 19 and 24 of the conditions of contract within the contract period. No claim shall be entertained if the contractor has not complied with the said conditions or upon the expiry of the said contact period.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>PROJECT IDENTIFICATION AND PUBLICITY SIGNBOARD</u> Allow for the provision, erection, maintenance through out the contract period and removal on completion when so directed by the PROJECT MANAGER of 1No. Project Identification and Publicity Signboard of the size, construction and lettering /signage as designed, detailed, specified, and approved by the PROJECT MANAGER.</p>	
B	<p><u>PROJECT PUBLICITY BOARD SIGNAGE</u> Allow a Provisional Sum of Kenya Shillings Ten Thousand (Kshs. 10,000/=) only for the Project Identification and Publicity Signboard Signage to be expended in accordance with the PROJECT MANAGER written instructions</p>	10,000.00
C	<p><u>PROJECT MANAGEMENT EXPENSES</u> Provide a Provisional Sum of Kenya Shillings Fifty Thousand (Kshs. 50,000/=) only for the Project management expenses to be expended as directed by the Project Manager or deducted in whole</p>	50,000.00
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
II	<p><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement: -</p> <p>Period of Final Measurement 3 Months From Practical completion</p> <p>Defects Liability Period 6 Months from Practical completion</p> <p>Date for Possession To be agreed with the Project Manager</p> <p>Date for Completion To be 20 Weeks from the date of Site Possession</p> <p>Liquidated and Ascertained damages At the rate of 0.05% of the Contract Sum per day</p> <p>Period of Interim Certificates Monthly</p> <p>Period of Honouring Certificates 30 days</p> <p>Percentage of Certified Value Retained 10%</p> <p>Limit of Retention Fund 10%</p> <p>The Price Adjustment Clause SHALL NOT apply</p> <p>Price for VAT should be included in the tenderer's rates</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
	<p><u>COLLECTION</u></p> <p>Brought forward from page PP/1</p> <p>Brought forward from page PP/2</p> <p>Brought forward from page PP/3</p> <p>Brought forward from page PP/4</p> <p>Brought forward from page PP/5</p> <p>Brought forward from page PP/6</p> <p>Brought forward from page PP/7</p> <p>Brought forward from page PP/8</p>	
	<p>TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO GRAND SUMMARY</p>	

ITEM	DESCRIPTION	AMOUNT - KSHS
	<p><u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH</u></p> <p><u>GENERAL PRELIMINARIES</u></p> <p>A PRICING ITEMS OF PRELIMINARIES AND PREAMBLES Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specifications.</p> <p>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.</p> <p>B ABBREVIATIONS Throughout these Bills, units of measurement and terms are abbreviated and shall be all the requirements for the proper execution of the whole of the works in the Contract.</p> <p><i>C.M.</i> Shall mean cubic metre</p> <p><i>S.M.</i> Shall mean square metre</p> <p><i>L.M.</i> Shall mean linear metre</p> <p><i>MM</i> Shall mean Millimetre</p> <p><i>Kg.</i> Shall mean Kilogramme</p> <p><i>No.</i> Shall mean Number</p> <p><i>Prs.</i> Shall mean Pairs</p> <p><i>B.S.</i> - Shall mean the British Standard Specification Published</p> <p><i>Ditto</i> - Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p><i>m.s.</i> Shall mean measured separately.</p> <p><i>a.b.d</i> Shall mean as before described.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>METHOD OF MEASUREMENT</u></p> <p>Notwithstanding any contrary provision in the conditions of contract all quantities shall be deemed to have been prepared in accordance with current edition of the Standard Method of Measurement of Building Works for the Republic of Kenya.</p> <p>The rates set down by the contractor against each item in the particular specifications shall, unless otherwise expressly provided to the contrary, or unless there is a separate item for extra labour, cutting or waste, be held to include for waste of materials, carriage and cartage, carrying in and return of empties, hoisting setting, fitting and fixing in position, making and all other labour and everything else necessary for the proper completion of each item and for establishment charges and profit. Each items of cutting shall include for consequent waste.</p>	
B	<p><u>EXCEPTIONS TO THE STANDARD METHOD OF MEASUREMENT</u></p> <p><u>Attendance:</u> 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 and shall be deemed to include: allowing use of standing scaffolding, messrooms, sanitary conditions and welfare facilities; provision of special scaffolding where necessary, office accommodation and for storage of plant and materials; providing light and</p> <p><u>Fix Only:-</u></p> <p>"Fix Only" shall mean take delivery at nearest major supply centre, 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>	
C	<p><u>ALTERATIONS TO BILLS, PRICING, ETC.</u></p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>EMPLOYER</u> The "Employer" is the COUNTY GOVERNMENT OF KIRINYAGA. The term "Employer" and "Government" wherever used in the contract document shall be synonymous</p>	
B	<p><u>PROJECT MANAGER</u> The term "PROJECT MANAGER" wherever used in these Bills of Quantities shall be deemed to imply the person defined in Condition 1 of the Conditions of Contract hereby attached or such person or persons as may be duly authorised to represent him on behalf of the Government.</p>	
C	<p><u>ARCHITECT</u> The term "Architect" shall be deemed to mean "The PROJECT MANAGER" as defined above whose address unless otherwise notified is the County Department of Transport, Roads and Public Works, P.O. Box 390, KERUGOYA.</p>	
D	<p><u>QUANTITY SURVEYOR</u> The term "Quantity Surveyor" shall be deemed to mean "The PROJECT MANAGER" as defined above whose address unless otherwise notified is the County Department of Transport, Roads and Public Works, P.O. Box 390, KERUGOYA.</p>	
E	<p><u>ELECTRICAL ENGINEER</u> The term "Electrical Engineer" shall be deemed to mean "The PROJECT MANAGER" as defined above whose address unless otherwise notified is the County Department of Transport, Roads and Public Works, P.O. Box 390, KERUGOYA.</p>	
F	<p><u>MECHANICAL ENGINEER</u> The term "Mechanical Engineer" shall be deemed to mean "The PROJECT MANAGER" as defined above whose address unless otherwise notified is the County Department of Transport, Roads and Public Works, P.O. Box 390, KERUGOYA.</p>	
G	<p><u>STRUCTURAL ENGINEER</u> The term "Structural Engineer" shall be deemed to mean "The PROJECT MANAGER" as defined above whose address unless otherwise notified is the County Department of Transport, Roads and Public Works, P.O. Box 390, KERUGOYA.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>FORM OF CONTRACT</u> The form of contract will be the one included in the Republic of Kenya's (PPOA) Standard Tender Document for Procurement of Works (2006 Edition) hereby attached and Conditions of Contract are those attached thereto. If the Contractor considers that compliance with any of the Conditions of Contract involves any expenses distribute them among his rates for the various items in the Bills of Quantities. No claim shall be allowed arising from the Contractors compliance with <u>any of the Conditions of Contract</u>. These are numbered from 1 to 37 as set out on pages 18 to 40 of these tender documents. Particulars of the insertion to be made in the Appendix of the Appendix of the Contract Agreement will be found in the Particular Preliminaries of these Bills of Quantities.</p> <p>The Conditions of Contract are also included hereir <u>Conditions of Contract</u> These are as contained in 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> <p><u>GENERAL SPECIFICATIONS.</u> 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, 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><u>WORKS</u> Except as amplified under the item "Insurance" in these Preliminaries, the word "Works" in the Particular Specification shall include the work of all sub contractors and shall include all the approved variations.</p> <p><u>VISIT SITE AND EXAMINE DRAWINGS.</u> 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 his tender his tender. No claim arising from his failure to comply with this recommendation will be considered</p> <p><u>AREA TO BE OCCUPIED BY THE CONTRACTOR</u> 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>ACCESS TO SITE AND TEMPORARY ROADS.</u> Means of access to the site shall be agreed with the PROJECT MANAGER prior to commencement of the work and contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including 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, culverts, bridges, etc.and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.</p>	
B	<p><u>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</u> 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 at his 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>	
C	<p><u>SANITATION OF THE WORKS</u> The Sanitation of the works shall be arranged and maintained by the Contractor in accordance with Public Health and Labour Departments requirements and to the satisfaction of the the PROJECT MANAGER.</p> <p>The Pit latrines shall be enclosed with framing and corrugated iron sheet roof, side and partition. The site of the latrine shall be agreed with the PROJECT MANAGER and the works shall not be commenced beforethe sanitary accommodation has been approved by the PROJECT MANAGER and the above mentioned authorities.</p> <p>The contractor will beequired to pay employ sufficient sewwppers on the site to ensure clean maintenance and daily disinfecting of the latrines and not less than once per week, the whole area and the enclosures shall be sprayed with disinfectant and insecticide and on completion the works, the latrines shall be removed and all works and surfaces disturbed made good and the whole area disinfected and left clean and free from pollution to the satisfaction of the PROJECT MANAGER and local authorities.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>SECURITY OF WORKS ETC.</u> 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. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.</p>	
B	<p><u>OFFICE FOR THE PROJECT MANAGER</u> The contractor shall provide, erect and maintain where directed on site and afterwards dismantle the Site Office of the type noted in the particular preliminaries, 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 maintain a lock-up pedestral type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction Government and Medical Officer of Health and pay the services of a cleaner and pay all conservancy charges and keep both office and 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 complete before the contractor is permitted to commence the works. The Contractor shall make available on site as and when required by the PROJECT MANAGER a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic linen tape.</p>	
C	<p><u>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</u> The Contractor shall constantly keep on the works a 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>	
D	<p><u>TRANSPORT.</u> 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>SCAFFOLDING, PLANT, TOOLS AND VEHICLES</u> 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 hereiin. No timber used for formwork, scalfolding or temporary works of any kind shall be used afterwards in the permanent work.</p>	
B	<p><u>SETTING OUT</u> The PROJECT MANAGER shall furnish to the contractor either by way of carefully dimensioned drawings or by personnel supervision at the time of setting out the works such information as shall enable the contractor to set out the enclosing walls of the building at ground level after which the contractor shall be responsible and shall at his own cost amend any errors arising from his own inaccurate setting out unless the PROJECT MANAGER shall state otherwise in</p>	
C	<p><u>MATERIALS AND WORKMANSHIP.</u> 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 from local sources as early as necessary to ensure that they are on site when required for use in the the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p>	
D	<p><u>STORAGE OF MATERIALS</u> The Contractor shall provide at his own risk and cost where directed on the site weatherproof lockup sheds for the safe storage and custody of materials for the works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged 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>	
E	<p><u>MATERIALS ON SITE</u> 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>MATERIALS ARISING FROM EXCAVATIONS</u> 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> <p><u>MATERIALS FROM DEMOLITIONS</u> Any materials from demolitions and not re-used shall become the property of the Client/User. The Contractor shall allow in his rates for the cost of transporting, storing and securing the materials on site as directed by the PROJECT MANAGER.</p> <p><u>SIGN FOR MATERIALS SUPPLIED.</u> The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT MANAGER 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> <p><u>PUBLIC AND PRIVATE ROADS.</u> 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 and the PROJECT MANAGER</p> <p><u>EXISTING PROPERTY.</u> 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>QUALITY OF THE WORKS</u> The works should be of high quality and the contractor will be required to make samples of the work to be executed for approval by the PROJECT MANAGER before he commences the carrying out of the works. The contractor should allow for sample works in his rates accordingly. In case a sample does not meet the standards set by the Project Manager, the contractor shall be expected to make another sample at his cost until it is approved by the PROJECT MANAGER.</p>	
B	<p><u>SAMPLES</u> 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 Materials Branch, Ministry of Transport and Infrastructure.</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>	
C	<p><u>GOVERNMENT ACTS REGARDING WORKPEOPLE ETC.</u> Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 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 and 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 from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>SUPERVISION AND WORKING HOURS</u> The works shall be executed under the direction and to 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 work is being prepared for the contract. The working hours shall be those generally worked by good employers in the in the Building and Civil Engineering trades in Kenya. No work shall be carried out at night or on gazetted holidays unless the PROJECT MANAGER shall so direct. No work shall be covered up nor shall any concreting be carried out in the in the absence of the Clerk of Works without prior approval of the PROJECT MANAGER in writing.</p> <p><u>PROTECTION OF THE WORKS.</u> 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> <p><u>BLASTING OPERATIONS</u> 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 sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives.</p> <p><u>REMOVAL OF RUBBISH AND SITE CLEARANCE ETC.</u> The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the PROJECT MANAGER</p> <p><u>WORKS TO BE DELIVERED UP CLEAN</u> 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 metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>PROVISIONAL SUMS.</u> 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 conditions of Contract. Such sums are net and no addition shall be made to them for profit.</p>	
B	<p><u>ADJUSTMENT OF PROVISIONAL SUMS.</u> In the Final Account all Provisional Sums shall be deducted and the value of the work 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 condition No. 22 of the Conditions of Contract, but should any part of the contract be executed by a nominated Sub-Contractor, or any articles for the Work 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>	
C	<p><u>PRIME COST (OR P.C.) SUMS.</u> 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>	
D	<p><u>ADJUSTMENT OF P.C. SUMS.</u> 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 them added to the Contract sum. The Contractor shall provide 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. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them. Should the Contractor be permitted to tender and his tender be accepted 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>	
	<i>Total to collection</i>	

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>NOMINATED SUB-CONTRACTORS</u> 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-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract contractor's work concerned in the P.C. Sums under the description "Add for Attendance".</p>	
B	<p><u>DIRECT CONTRACTS</u> 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 the instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>	
C	<p><u>ATTENDANCE UPON OTHER TRADESMEN, ETC.</u> 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, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>	
D	<p><u>PROVISIONAL WORK</u> 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 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 his own expense.</p>	
<i>Carried to collection</i>		

ITEM	DESCRIPTION	AMOUNT - KSHS
A	<p><u>TRAINING LEVY</u> Legal notice No. 237 of October, 1971 requires payment by the contractor of a training levy of a quarter percent (1/4 %) of the value of the contract where the contract value exceeds KShs. 50,000/=. The contractor will be required to furnish the PROJECT MANAGER with a receipt showing that he has paid the required Training Levy to the Director of Industrial Training. In case the contractor fails to furnish the said receipt to thePROJECT MANAGER, the Client will pay the amount to the Director of Industrial Training from monies due to the contractor.</p>	
	<i>Carried to collection</i>	
	<p><u>COLLECTION</u></p> <p>Brought forward from page GP/1</p> <p>Brought forward from page GP/2</p> <p>Brought forward from page GP/3</p> <p>Brought forward from page GP/4</p> <p>Brought forward from page GP/5</p> <p>Brought forward from page GP/6</p> <p>Brought forward from page GP/7</p> <p>Brought forward from page GP/8</p> <p>Brought forward from page GP/9</p> <p>Brought forward from page GP/10</p> <p>Brought forward from page GP/11</p> <p>Brought forward from page GP/12</p> <p>Brought forward from page GP/13</p> <p>Brought down from above</p>	
	TOTAL FOR GENERAL PRELIMINARIES CARRIED TO GRAND SUMMARY	

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</u>				
	<u>BILL NO. 3: 3 NO. CLASSROOMS BLOCK</u>				
	<u>ELEMENT NO. 1: SUBSTRUCTURES (ALL PROVISIONAL)</u>				
	<u>Excavations including maintaining and supporting sides and</u>				
A	Oversite to remove top soil average 150mm deep and keep on site for later re-use for landscaping	402	Sm		
B	Oversite to reduce levels commencing from stripped level average 300 mm deep.	290	Sm		
C	Excavate strip foundation trench not exceeding 1.50 meters deep starting from reduced level	90	Cm		
	<u>Disposal and back filling</u>				
D	Return, fill-in and rum selected excavated materials around foundations	43	Cm		
E	Load, wheel and cart away surplus excavated materials and deposit in approved dumping area on site	47	Cm		
	<u>Fillings and Anti termite treatment</u>				
F	Hardcore filling in making up levels average 300mm thick in layers of 150mm maximum thickness	252	Sm		
G	50mm thick quarry dust blinding to surfaces of hardcore	252	Sm		
H	Premise 200 SC' or other equal and approved anti-termite insecticide treatment applied strictly in accordance with manufacturer's instructions, to tops of fill and foundation walls	275	Sm		
	<u>50mm thick mass concrete mix 1:4:8; under:</u>				
I	Strip foundation	71	Sm		
	<u>Mass concrete mix 1:3:6 in:</u>				
J	Verandah Strip foundation	4	Cm		
	<i>Carried to collection</i>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
A	<u>In situ concrete; reinforced; class 20/20); mix 1:2:4; vibrated</u> Strip foundation	11	Cm		
B	125 mm thick floor bed	275	Sm		
<u>Reinforcement: Bars; high yield steel to B.S. 4461 including bends, hooks, tying wire and distance blocks:</u>					
C	8mm diameter bars	140	Kg		
D	10mm ditto	292	Kg		
<u>Mesh fabric reinforcement to B.S 4483 and setting in concrete with 300 mm side and end laps (measured nett-allow for laps) allow for tying wire and spacer blocks</u>					
E	Reference A142 mesh 200 x 200 mm, weight 2.22 Kg/Sm	275	Sm		
<u>Sawn formwork as described to:-</u>					
F	Edge of ground slab 75-150mm high	75	Lm		
<u>Foundation Walling</u>					
G	200 mm thick approved local natural stone walling; roughly squared; bedding and jointing in cement sand (1:3) mortar	124	Sm		
<u>Damp proofing polythene sheet:</u>					
H	500 gauge, 200mm welted laps (no allowance made to laps), horizontal; 1 no. layer laid on compacted quarry dust blinding	275	Sm		
<u>Plinth finishes and External paving</u>					
I	14mm thick 2 No. coatwork cement sand (1:3) render; wood floated to concrete or blockwork base to walls; external	23	Sm		
J	Prepare and apply three coats of black bituminous paint on wood floated rendered plinth surfaces.	23	Sm		
K	600 x 600 x 50mm thick Precast Concrete paving slabs, laid to falls on and including 50mm thick gravel or murrum base well compacted at optimum moisture content around the building	47	Sm		
<i>Carried to collection</i>					
<u>COLLECTION</u>					
1	Brought Forward from Page YP/CR/1				
2	Brought Forward from Above				
TOTAL FOR SUBSTRUCTURES CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
<u>ELEMENT NO. 2: SUPERSTRUCTURE FRAME AND WALLING</u>					
<u>REINFORCED CONCRETE WORKS</u>					
<u>Insitu concrete; reinforced; class 20/20); mix 1:2:4; vibrated</u>					
A	Ring beam	5	Cm		
<u>Reinforcement: Bars; high yield steel to B.S. 4461 including bends, hooks, tying wire and distance blocks</u>					
B	12mm diameter bars	313	Kg		
C	8mm ditto	174	Kg		
<u>Sawn formwork as described to:-</u>					
D	Sides and soffites of Ringbeams	58	Sm		
<u>WALLING</u>					
<u>2-ply bituminous felt damp-proof courses, under walls:</u>					
E	200mm wide	85	Lm		
<u>Walling in fine chisel dressed stone obtained from an approved quarry, bedded and jointed in gauged cement:sand (1:3); and reinforced with 25mm wide x 3mm thick hoop iron strips at every alternate course in:</u>					
F	200mm thick External walls	153	Sm		
	Ditto Internal Walls	43	Sm		
G	Ditto in Gable walls	34	Sm		
H	Labour and materials for eaves filling 200mm thick walls average	55	Lm		
I	Raking cutting 200mm thick wall and filling as described above	37	Lm		
<u>Metal work - Mild Steel Sections</u>					
J	75mm diameter x 3mm thick diameter steel tube posts 3500mm long with raged pins at bottom and U shaped shoe at the top and once drilled for bolting with bottom cast in concrete base, steel to be primed and painted.	10	No		
<u>Prepare and apply one coat etching primer, one undercoat and two coats first quality gloss oil paint on:</u>					
K	Surfaces of metal tube (m/s) girth 200 - 300mm	28	Lm		
TOTAL FOR SUPERSTRUCTURE FRAME CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 3: ROOF</u>				
	<u>The following in 21No. Roof trusses with nailed or bolted connections including hoisting and fixing in position not exceeding 3.0 metres above ground floor level</u>				
	<u>(All timber in sawn second grade cypress well celcured with</u>				
A	100 x 50mm Rafters	248	Lm		
B	150 x 50mm Tie joists	208	Lm		
C	100 x 50mm King posts, struts and ties	307	Lm		
D	100 x 50mm wall plate fixed with and including 200mm long 12mm diameter rag bolts cast into beam at 750mm centers	55	Lm		
E	150 x 50mm Main Beam	28	Lm		
F	75 x 50mm Purlins	284	Lm		
	<u>In wrot cypress</u>				
G	250 x 25mm thick fascia/verge boards; nailed	80	Lm		
	<u>Prepainted, Gauge 28 Box profiled Roofing sheets</u>				
H	Roof covering; 150mm laps on one end and one and a half corrugation side lap; nailed to timber purlins (m.s)	355	Sm		
I	Half round standard ridge/hip cover to match	29	Lm		
	<u>Prepare and apply one undercoat and two finishing coats first quality gloss oil paint on:</u>				
J	Timber surfaces girth 200 - 300mm	80	Lm		
	TOTAL FOR ROOFING CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 4: WINDOWS AND DOORS</u>				
	<u>Precast concrete class 20 fair faced all exposed surfaces bedded and jointed cement and sand (1:3) mortar</u>				
A	275 x 50mm thick once rebated and throated window cill	24	Lm		
	<u>Mild steel Door s and Casement Windows (All to approved details)</u>				
	<u>Supply and fix the following purpose made small pane steel casement windows fabricated from approved mild steel sections (min. 2.5 mm thick); window comprising of 75mm high perforated permanent vent and hood at the top and infilled with mosquito gauze wire; approved pattern 10mm solid bars burglar proofing grille; metal fixing lugs and fixing into masonry/concrete; all necessary fasteners, closers and hinges; prime all metal surfaces with red oxide primer before delivery to site:-</u>				
B	Window size 1500 x 1500 mm high	9	No		
C	Window size 1500 x 900 mm high	6	No		
	<u>Purpose made mild steel framed door; 50 x 50 x 6mm RHS framing plugged to concrete or masonry all round ; anchored with 100mm long fishtailed 25 x 25 x 2mm thick angle section at 300mm centres; single swing door leaf comprising of 50 x 45 x 3mm RHS stiles, bottom, top and middle rails; bottom panel infilled with 3mm and top panel glazed; complete with hinges, padlock bolt and receiver, burglar grilles; all welds ground to smooth; one coat red oxide primer before delivery to site in:</u>				
D	Single leafed door size 1200 x 2400 mm high	3	No		
	<u>4mm Thick Glazing; fixed to metal casement with putty</u>				
E					
D	Clear sheet glass panes not exceeding 0.10 Sm to Windows	14	Sm		
F	Ditto. To Doors	1	Sm		
	<u>Prepare and apply one coat etching primer, one undercoat and two coats first quality gloss oil paint on:</u>				
G	Windows: General glazed metal surfaces both sides measured	57	Sm		
H	Door: Ditto	15	Sm		
	TOTAL FOR WINDOWS AND DOORS CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO 5: FINISHES</u>				
	<u>Floor finishes; Internally</u>				
	<u>Floor bed Paving. Coloured cement and sand (1:4) with approved intergral dust proofing additive with steel trowelled smooth as:-</u>				
A	40mm thick floor screed paving	258	Sm		
B	100mm high skirting with top rounded edge and coved at the junction with the floor	124	Lm		
	<u>Wall finishes</u>				
C	Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand (1:3) mortar; one coat of bituminous paint.	153	Sm		
	<u>Render; 15mm thick one coat cement :sand (1:3); wood floated to concrete or blockwork base externally to: -</u>				
D	Ringbeam	22	Sm		
E	Gable walls	17	Sm		
	<u>Plaster; 15mm thick, two coat work, cement:sand (1:3) 12mm first coat; 3mm cement:lime (1:9) putty second coat steel trowelled to concrete /masonry base internally to:</u>				
F	Walls, beams and internal	239	Sm		
	<u>Black board</u>				
G	Extra over ditto plaster for Blackboard quality finish to approval	24	Sm		
H	75 x 50mm wrought cypress framing for blackboard size 6000 x 1350mm high	90	Lm		
I	Knot prime stop and apply three coats of gloss oil paint to general surfaces on wood not exceeding 200mm girth	90	Lm		
	<u>Prepare and apply one undercoat and three coats of first quality Emulsion paint to the following surfaces</u>				
J	Rendered surfaces externally	39	Sm		
K	Plastered walls internally	215	Sm		
L	Ditto. To Blackboard surfaces to approval	24	Sm		
Prepared and Issued by: TOTAL FOR FINISHES CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO 6: ELECTRICAL WORKS</u>				
	<u>Supply, install, test and commission the following</u>				
A	<u>LIGHTING SYSTEM</u>				
1.01	Lighting point wired in 3x1.5 mm ² single core PVC cu cables drawn in concealed 20mm heavy gauge PVC conduits and including all accessories but excluding the light fitting itself.				
	i) One way switching	30	No		
1.02	6A lighting switch as MK or approved equal				
	i) 2 gang 2 way	9	No		
1.03	Bulk head lighting fitting as in phillips complete with 18watts energy saving lamp or approved equivalent	9	No		
1.05	1200mmx1x36watts fluorescent fitting complete as T&J or any other approved equivalent.	30	No		
B	<u>CONSUMER UNITS & SUB-MAINS</u>				
2.01	2Ways consumer unit Complete with 100A Isolator as Hager	1	No		
	i)10A SP MCB	2	No		
2.02	Sub-mains circuit 3x10mm ² singles core E.A cu cable drawn in 32mm PVC conduits from loop-in box to consumer unit.	5	Lm		
2.03	16.0mm ² 2 core PVC .S.W.A PVC underground E.A cu cable from meter cubicle to Classroom loop-in box.	10	Lm		
2.04	Trenching, laying, Tilling with Hatari tiles and backfilling work.	10	Lm		
2.05	Metallic Loop-In box Gauge 18SWG complete with 1-phase cut-outs	1	No		
D	<u>EARTHING</u>				
2.06	Earthing in accordance with KP&L company requirements, IEE regulations,the government Electrical Installations regulations and other statutory requirement.	1	Item		
TOTAL FOR ELECTRICALWORKS CARRIED TO GRAND SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<p><u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</u></p> <p><u>BILL NO. 3: 3 NO. CLASSROOMS BLOCK</u></p> <p><u>SUMMARY</u></p>				
NO.	ELEMENT			PAGE	AMOUNT-KSHS
1	SUBSTRUCTURES			YP/CR/2	
2	SUPERSTRUCTURE FRAME AND WALLING			YP/CR/3	
3	ROOF			YP/CR/4	
4	WINDOWS AND DOORS			YP/CR/5	
5	FINISHES			YP/CR/6	
6	ELECTRICAL WORKS			YP/CR/7	
TOTAL FOR 3 NO. CLASSROOMS BLOCK CARRIED TO GRAND SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</u>				
	<u>BILL NO. 4: ECO - TOILET BLOCK</u>				
	<u>ELEMENT NO. 1: SUBSTRUCTURES (ALL PROVISIONAL)</u>				
A	Clear site of all existing structures; dispose arisings as directed	45	Sm		
	<u>Excavations</u>				
B	Oversite to remove top soil average 150mm deep and keep on site for later re-use for landscaping	45	Sm		
C	Oversite to reduce levels commencing from stripped level average 300 mm deep.	-	Cm		
D	Excavate strip foundation trench starting from stripped level not exceeding 1.50 meters deep.	32	Cm		
E	Extra-over all excavation for excavating any class of rock	6	Cm		
F	Return, fill-in and rum selected excavated materials around foundations	21	Cm		
G	Load, wheel and cart away surplus excavated materials and	11	Cm		
	<u>Fillings and Anti termite treatment</u>				
I	Hardcore filling in making up levels average 300mm thick in layers of 150mm maximum thickness	33	Sm		
J	50mm thick quarry dust blinding to surfaces of hardcore	33	Sm		
K	Premise 200 SC' or other equal and approved anti-termite insecticide treatment applied strictly in accordance with manufacturer's instructions, to tops of fill and foundation walls	38	Sm		
	<u>50mm thick mass concrete mix 1:4:8; to bottoms of:</u>				
L	Strip foundation	21	Sm		
	<u>Insitu concrete; reinforced; class 20/20); mix 1:2:4; vibrated</u>				
M	Strip foundation	4	Cm		
N	125 mm thick bed	38	Sm		
P	250mm (average) wide x 250 mm deep trapezium shaped thickening and hand packing hardcore to two sloping sides	8	Lm		
	Total carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>Reinforcement: Bars; high yield steel to B.S. 4461 including</u>				
A	8mm diameter bars	54	Kg		
B	10mm ditto	73	Kg		
	<u>Mesh Fabric; B.S. 4483</u>				
C	Reference A142 mesh 200 x 200 mm , weight 2.22 kgs per	38	Sm		
	<u>Sawn formwork as described to:-</u>				
D	Edge of ground slab 75-150mm high	28	Lm		
	<u>Substructures walling</u>				
E	200 mm thick approved local natural stone walling; roughly squared; bedding and jointing in cement sand (1:3) mortar and reinforced with and including 20swg x 25mm wide hoop iron in every alternate course.	44	Sm		
	<u>Damp proofing:</u>				
F	500 gauge, 200mm welted laps (no allowance made to laps), horizontal; 1 no. layer laid on compacted quarry dust blinding	38	Sm		
	<u>Plinth finishes</u>				
G	14mm thick 2 No. coatwork cement sand (1:3) render; wood floated to concrete or blockwork base to walls; external	13	Sm		
H	Prepare and apply three coats of black bituminous paint on wood floated rendered plinth surfaces.	13	Sm		
	<u>Precast concrete standard paving slabs; class 20 (20mm)</u>				
J	600 x 600 x 50mm thick, laid to falls on blinded hardcore (m/s) surface; jointing and pointing in cement and sand (1:3) mortar	19	Sm		
	Total carried to collection				
	COLLECTION				
	Brought forward from page YP/TB/1				
	Brought down from page above				
	TOTAL FOR SUBSTRUCTURES CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 2: SUPERSTRUCTURE FRAME</u>				
	<u>REINFORCED CONCRETE FRAME</u>				
	<u>Insitu concrete; reinforced; class 20/20); mix 1:2:4; vibrated</u>				
A	Beams and Ring beam	3	Cm		
	<u>Reinforcement: Bars; high yield steel to B.S. 4461 including</u>				
B	12mm diameter bars	196	Kg		
C	10mm ditto	-	Kg		
D	8mm ditto	88	Kg		
	<u>Sawn formwork as described to:-</u>				
E	Sides and soffites of beams	35	Sm		
	<u>WALLING</u>				
	<u>2-ply bituminous felt damp-proof courses, under walls:</u>				
F	150mm wide	42	Lm		
	<u>Walling in fine chisel dressed stone obtained from an approved quarry, bedded and jointed in gauged cement:sand (1:3); and reinforced with 25mm wide x 3mm thick hoop iron strips at every alternate course in:</u>				
G	150mm thick External and Gable walls	56	Sm		
H	Ditto. Internal walls	27	Sm		
I	Labour and materials for eaves filling 200mm thick walls average 200mm high to the profile of roof covering sheets	18	Lm		
J	Raking cutting 200mm thick wall and filling as described above	18	Lm		
TOTAL FOR SUPERSTRUCTURE FRAME CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 3: ROOFING</u>				
	<u>The following in 9No. Roof trusses with nailed or bolted connections including hoisting and fixing in position not exceeding 3.60 metres above ground floor level</u>				
	<u>(All timber in sawn celcured second grade cypress or other equal and approved)</u>				
A	100 x 50mm rafters	37	Lm		
B	100 x 50mm tie joist	36	Lm		
C	100 x 50mm king posts	4	Lm		
D	100 x 50mm struts and ties	36	Lm		
E	100 x 50mm wall plate fixed with and including 200mm long 12mm diameter rag bolts cast into beam at 750mm centers	10	Lm		
F	75 x 50mm purlins	43	Lm		
	<u>In wrot cypress</u>				
G	250 x 25mm thick fascia/verge boards; nailed	20	Lm		
	<u>Prepainted, Gauge 30 Corrugated Roofing sheets</u>				
H	Roof covering; 150mm laps on one end and one and a half corrugation side lap; nailed to timber purlins (m.s)	42	Sm		
I	Half round standard ridge/hip cover to match	6	Lm		
	<u>28Gauged galvanised steel sheet shaped as required</u>				
J	300mm girth twice bent flashing with one chased and grouted to wall in cement and sand mortar	9	Lm		
K	600mm wide valley gutter	-	Lm		
	<u>Knot, prime and stop; prepare and apply one undercoat and two coats of gloss oil paint on:</u>				
L	Timber Surfaces girth 200 - 300mm	20	Sm		
TOTAL FOR ROOFING CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 4: DOORS</u>				
	<u>Metal doors</u>				
	<u>Purpose made mild steel casement door; 50x50x6mm RHS framing plugged to concrete or masonry all round; anchored with 100mm long fishtailed 25 x 25 x 2mm thick angle section at 300mm centres; single swing door leaf comprising of 50 x 45 x 3mm RHS stiles, bottom, top and middle rails; bottom panel infilled with 3mm thick metal sheet welded to framed sections on one side; top panel glazed (m.s); complete with hinges, padlock bolt and receiver, burglar grilles on glazed panels; all welds ground smooth; one coat red oxide primer before delivery to site:</u>				
A	Metal Door Size 900x 2100mm high; glazed (m.s)	1	No		
B	Metal Door Size 1200x 2100mm high; glazed (m.s)	1	No		
	<u>Wrot Cypress</u>				
C	100 x 50 mm; 2 No. labours; plugged door frame	46	Lm		
	<u>Wrot cypress finishings</u>				
D	50 x 35mm moulded architrave	46	Lm		
E	25mm moulded quadrants	46	Lm		
	<u>Timber door size 930 x 2060mm high</u>				
F	50mm thick purpose made framed doors consisting of 150 x 50mm pair of styles, top and middle rail and 200 x 50mm bottom rail, filled with 50mm thick 4 no. moulded, raised and beaded panels in overall door size:	2	No		
G	45 mm thick flush door; ordinary plywood faced on both sides and lipped on all edges in approved hardwood	5	No		
	<u>Supply and fix the following iron mongery to UNION</u>				
H	100mm steel butt hinges	12	Prs		
I	2 Lever mortice lock complete with lever furniture	3	No		
J	200mm long Stainless steel Padlock bolt and receiver	5	No		
K	100mm long Aluminium Barrel bolt	5	No		
L	Rubber door stop with rawl bolt fixed to floor	4	No		
M	Stainless steel Coat/ Hat hook	6	No		
	Total carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>Glazing: 4mm thick clear sheet glass to</u>				
A	Metal with putty; ditto	1	Sm		
	<u>Prepare and apply one coat etching primer, one undercoat and two coats first quality gloss oil paint on:</u>				
B	General surfaces of glazed casement metal doors	9	Sm		
	<u>Knot, prime and stop; prepare and apply one undercoat and two coats of gloss oil paint on:</u>				
C	General surfaces of timber doors (both sides measured)	32	Sm		
D	Surfaces; over 100mm but not exceeding 200mm girth; internal	46	Lm		
E	Ditto not exceeding 100mm girth; internal	92	Lm		
Total carried to collection					
COLLECTION					
Brought forward from page YP/TB/6					
Brought down from page above					
TOTAL FOR DOORS CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 5: WINDOWS</u>				
	<u>Precast concrete class 20 fair faced all exposed surfaces bedded and jointed cement and sand (1:3) mortar</u>				
A	275 x 50mm thick once rebated and throated window cill	10	Lm		
	<u>Supply and fix the following purpose made small pane steel casement windows fabricated from approved mild steel sections (min. 2.5 mm thick); window comprising of 75mm high perforated permanent vent and hood at the top and infilled with mosquito gauze wire; approved pattern 10mm solid bars burqlar proofing grille; metal fixing lugs and fixing into masonry/concrete; all neccessary fasteners, closers and hinges; prime all metal surfaces with red oxide primer before delivery to site:-</u>				
B	Window size 1500 x 900mm high	2	No		
C	Window size 600 x 900mm high	1	No		
D	Window size 1800 x 600mm high	1	No		
E	Window size 900 x 500mm high	1	No		
F	Window size 500 x 500mm high	5	No		
	<u>Glazing; fixed to metal casement with putty</u>				
G	4 mm Thick clear sheet glass panes not exceeding 0.10 sm	5	Sm		
H	Ditto but obscured panes; ditto	2	Sm		
	<u>Prepare and apply one coat etching primer, one undercoat and two coats first quality gloss oil paint on:</u>				
I	General metal surfaces	14	Sm		
TOTAL FOR WINDOWS CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 6: FINISHES</u>				
	<u>Floor finishes</u>				
	<u>Mass Concrete mix 1:3:6 in:</u>				
A	2000mm long x 300mm wide x 150mm thick Urinal Plinth complete with sawn formwork to the edges.	1	No		
	<u>30 mm thick cement and sand (1:4) screed backing to</u>				
B	Concrete floor beds and slabsto receive floor tiles (m.s)	38	Sm		
	<u>Floor tiles fixed to cement: sand (1:4) screed bed with</u>				
C	12 mm thick ceramic; coloured; non-slip; semi - gloss finish	38	Sm		
D	100mm high skirting tile fixed as described before to wall	60	Lm		
	<u>Wall finishes</u>				
E	Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand (1:3) mortar; one coat of bituminous paint.	56	Sm		
	<u>Plaster;15mm thick, two coat work, cement:sand (1:3) 12mm first coat; 3mm cement:lime (1:9) putty second coat steel trowelled to concrete /masonry base generally to:</u>				
F	Walls, beams and columns; internal	70	Sm		
	<u>Render: 15mm thick one coat cement :sand (1:3); wood floated to concrete or blockwork base generally to: -</u>				
F	Wall, Beams and columns; external	8	Sm		
G	14mm thick backing to receive ceramic wall tiles	40	Sm		
	<u>Approved ceramic wall tiles to B.S. 1281; coloured; fixed in an approved pattern; bedding and jointing in cement sand (1:4) mortar, grout with coloured cement to match</u>				
H	6mm thick; butt joints straight both ways; to cement sand base (m/s) to walls internal	40	Sm		
Total carried to collection					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>Ceiling finishes</u>				
A	50 x 50mm sawn cypress brandering	146	Lm		
	<u>Softboard ceiling lining</u>				
B	12mm thick plain softboard "celotex" ceiling board nailed to timber brandering (m/s); nails punched and puttied	38	Sm		
	<u>Wrot cypress; well treated and seasoned</u>				
C	75 x 25mm moulded wrot cypress cornice	57	Lm		
	<u>Painting and Decorations</u>				
	<u>Prepare and apply one undercoat and three coats of first quality emulsion paint to the following surfaces to:</u>				
D	Plastered walls internally	70	Sm		
E	Rendered surfaces externally	8	Sm		
F	Soft board ceiling boards	38	Sm		
G	Moulded cornice surfaces not exceeding 100mm girth	57	Lm		
Total carried to collection					
COLLECTION					
Brought forward from page YP/TB/9					
Brought down from page above					
TOTAL FOR FINISHES CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<u>ELEMENT NO. 7: BUILDING FIXTURES</u>				
	<u>3No. Concrete worktops size 3000 x 600 x 900mm high</u>				
A	100mm thick concrete 1:3:6 in plinth	2	Sm		
B	75mm thick vibrated reinforced concrete mix (1:2:4) in suspended worktop slab	2	Sm		
C	Sawn formwork to soffites of ditto	2	Sm		
D	Ditto to edges of worktop 75-150mm high	3	Lm		
E	Ditto to edges of plinth	3	Lm		
F	100mm thick natural stone wall in cement:sand (1:4) mortar.	2	Sm		
G	12mm thick plaster on ditto	4	Sm		
H	Ditto to soffites of worktop	-	Sm		
J	12mm cement and sand screed (1:3) trowelled smooth to plinth	2	Sm		
K	Ditto to top of worktop to receive tiling finish	2	Sm		
L	10mm thick ceramic non slip floor tiles on top of slab	2	Sm		
	TOTAL FOR BUILDING FIXTURES CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	<p><u>ELEMENT NO. 8: MECHANICAL WORKS</u></p> <p><u>SANITARY FITTINGS</u></p> <p>Supply, deliver, install, test and commission the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors.</p> <p>Note: (i) All sanitary fittings shall be in approved colour. (ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings. (iii) Equivalent and Approved models may be acceptable.</p> <p><u>Squatting Water Closet</u></p> <p>A Squatting water closet suite in white vitreous china comprising of wc bowl with top plate and integral foot threads, S trap connector, 9 litres high cistern and fittings and pull chain including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, plastic flush pipe, inlet connector and cistern supports. All to be as Twyford Oriental or approved equivalent.</p> <p><u>Wash Hand basin (WHB)</u></p> <p>B Wash hand basin size 406 x 305mm with one tap holes and chain stay hole, 32mm diameter chrome plated pop up chain waste, concealed wall brackets, chrome plated single tap hole basin mixer as Cobra and chrome plated bottle trap (32mm 'P' trap) with 75mm seal. The wash hand basin to be as Twyford's 'Sola 510' or equal and approved.</p> <p><u>Urinal Slab</u></p> <p>C 2400 x 1200mm high Stainlesssteel Urinal slab complete for four persons chrome plated flush pipes, 7.5 litres ceramic automatic cistern, 40mm heavy duty plastic bottle trap and 40mm diameter chrome plated outlet with grating firmly fixed on the wall with chrome plated screws. The fittings shall be as Twyford's or equal and approved.</p> <p><u>Toilet Roll Holder</u></p> <p>D Toilet roll holder in vitreous china in white colour of size 165 X 165mm and recessed into wall. Toilet roll holder to be as "Twyford's semi recessed and ornamental"</p> <p><u>Mirrors</u></p> <p>E 6mm thick polished glass size 610 x 497mm, silverbacked mirror with bevelled edges, plugged and screwed to wall with 4No chrome plated chrome packed screws and 5mm thick foam back rest.</p>	5	No		
		4	No		
		1	No		
		6	No		
		4	No		
	Total Carried Forward				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought Forward				
	<u>Flexible Tubing</u>				
A	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve for connecting the sanitary fitting to water supply. To be as Cobra or equal and approved.	11	No		
	<u>Robe hook</u>				
B	Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. To be as Twyfords Spectrum 2000 accessories or equal and approved.	5	No		
	<u>WATER STORAGE TANK</u>				
C	Supply, deliver and install a PVC Water storage tank of capacity 1,000 litres. The tank should be complete with cover, ball float valve, inlet and outlet connections and overflow connection. The tank should be as " KENTANK" or approved equivalent. Allow for hoisting, placing and positioning the tank on raised platform (m.s) 2.7m above existing ground level	1	No		
E	25mm diamer ppr pipe	5	Lm		
F	25mm diameter elbow	4	No		
G	25 x 20mm diameter reducer	1	No		
H	25mm diameter union	2	No		
I	25mm diameter nipple	5	No		
J	25mm diameter gate valve as pegler	2	No		
K	25mm diameter plain socket	4	No		
	Total Carried Forward				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought Forward				
	<u>INTERNAL PLUMBING</u>				
	Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be PN 25 PPR pipes where exposed to adverse weather condition and all conforming to the current European standards for PPR installations and to the Engineers approval, pipe jointing shall be by polyfusion or use of electric coupling. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers recommended testing pressures.				
	<u>Pipes</u>				
A	20mm ppr pipe	35	Lm		
	<u>Extra over pipe work for</u>				
B	20mm diameter Tee	10	No		
C	20mm diameter union	10	No		
D	20mm diameter nipple	11	No		
E	20mm diameter elbow	8	No		
F	20 x 15mm diameter reducer	11	NO		
G	20mm diameter plain socket	10	No		
H	15mm diameter female socket	10	No		
	<u>Taps and Valves</u>				
J	20mm diameter pillar tap as pegler complete with stand pipe	1	No		
K	15mm diameter angle valve	11	No		
M	20mm gate valve as pegler	2	No		
	Total Carried Forward				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought Forward				
	<u>INTERNAL FOUL WATER DRAINAGE</u>				
	Supply, deliver and install the following UPVC, MUPVC, soil and				
	<u>UPVC soil and Waste systems c/w fittings</u>				
A	100mm diameter heavy duty brown pipe class 'D'	20	Lm		
B	100mm diameter heavy duty grey pipe class 'D'	6	Lm		
C	50mm diameter ditto	18	Lm		
D	40mm diameter ditto	5	LM		
	<u>Extra over UPVC pipe for the following</u>				
E	100mm diameter long radius bend	6	No		
F	100mm diameter inspection bend	6	No		
G	100mm diameter vent cowl	1	No		
H	100mm weathering apron	1	No		
I	100 x 50mm diameter floor trap and grating	3	No		
J	100mm diameter gulley trap	2	No		
K	100mm diameter single branch	2	No		
L	100mm diameter access cap	2	No		
K	50mm diameter sweep tee	4	No		
L	50mm diameter access cap	4	No		
M	40mm diameter sweep Tee	3	No		
N	40mm diameter access cap	3	No		
	Total Carried Forward				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought Forward				
	<u>DISABLED TOILET FACILITY</u>				
A	A completely assembled unit of wheel chair accessible WC/WHB disabled toilet combination facility comprising: (i) A close coupled white in colour WC bowl with horizontal outlet complete with 7.5L cistern complete with fittings and additional cover clip for additional security. 100mm high Avalon seat ring with chrome plated metal hinges. (ii) Wall mounted wash hand basin with one L/Hand or R/Hand offset tap hole and chain stay hole, wall brackets, lever action chrome plated 15mm diameter tap, chrome plated chain waste 32mm, (iii) 4No. 600mm diameter long rails. (iv) 1No. Hinged support rail and back support rail. All in nylon coated aluminium. (v) Mirror 400 x 900mm high fixed 900mm above the floor. The whole facility to conform in all aspects to the requirements of To be as Twyfords AVALON - D.O.C.M pack or equal and approved.	1	Set		
B	Allow for testing and commissioning of the plumbing and drainage system to the satisfaction of the Engineer.		Item		
C	Allow for builders work in relation to plumbing and drainage works		Item		
TOTAL FOR MECHANICAL WORKS CARRIED TO SUMMARY					
	<u>ELEMENT NO. 9: INSPECTION CHAMBERS</u>				
	<u>The following in 1 No. Inspection Chamber internal size 600 x 450 x 600 mm average depth.</u>				
A	Clear site of all existing structures; dispose arisings as directed	2	SM		
B	Excavate pit for Inspection chamber starting from ground level and not exceeding 1.5 metres deep.	2	CM		
C	Return, fill in and ram selected excavated materials from site.	1	CM		
D	Load, cart away and dispose extra excavation materials to sites approved by the local authorities and as directed.	1	CM		
	<u>Concrete (1:4:8 to 40 mm gauge) as described in :-</u>				
E	50 mm blinding under manhole bottom slab	0.3	SM		
Total Carried forward					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought forward				
	<u>Concrete (1:3:6) as described in :-</u>				
A	150mm thick benching size 600x450mm with 15mm thick waterproof cement:sand (1:2) rendering steel trowelled smooth including forming 150mm half round channels 800mm long.	1	NO		
	<u>In situ concrete; reinforced; class 20/20; mix 1:2:4; vibrated</u>				
B	100 mm thick manhole bottom slab	0.3	SM		
C	150 mm thick suspended Manholes cover slab	0.3	SM		
	<u>Sawn formwork as described to :-</u>				
D	Soffites of suspended slab.	0	SM		
E	Edge of bed 75 to 150 mm high	2	LM		
F	Edge of Suspended slab ditto	2	LM		
G	Extra over for boxing for rebate of manhole frame and cover	1	NO		
	<u>Reinforcement: Bars; high yield steel to B.S. 4461 including</u>				
H	10 mm diameter	5	KG		
	<u>Medium dressed approved natural quarry stone walling in cement and sand (1:3) mortar as described :-</u>				
I	150 mm walling reinforced as described	5	SM		
	<u>Sulphate resistant water proof cement and sand (1:4) render internally to walls steel trowelled smooth</u>				
J	12 mm thick waterproofed cement and sand (1:2) render to walls steel trowelled hard and smooth internally.	4	SM		
	<u>Cast iron manhole cover :-</u>				
K	600 x 450 mm approved medium duty coated cast iron manhole cover and frame and bedding frame in cement and sand (1:2) and setting frame in grease.	1	NO		
	Total Carried forward				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT-KSHS
	Total Brought forward				
	<u>Labour and material</u>				
A	Building in ends of 100mm diameter pipes to manholes	1	NO		
B	Ditto, 150 mm diameter ditto	2	NO		
	<u>Prepare and apply one undercoat and two finishing coats black bituminous paint</u>				
C	To Cast iron manhole coversand Framing (bsm)	1	SM		
	TOTAL FOR 1 NO. INSPECTION CHAMBER				x 3
	TOTAL FOR 3 NO. INSPECTION CHAMBERS CARRIED FORWARD				
	<u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</u>				
	<u>BILL NO. 4: ECO - TOILET BLOCK</u>				
	<u>SUMMARY</u>				
NO.	ELEMENT			PAGE	AMOUNT-KSHS
1	SUBSTRUCTURES			YP/TB/2	
2	SUPERSTRUCTURE FRAME			YP/TB/3	
3	ROOF			YP/TB/4	
4	DOORS			YP/TB/6	
5	WINDOWS			YP/TB/7	
6	FINISHES			YP/TB/9	
7	BUILDING FIXTURES			YP/TB/10	
8	MECHANICAL WORKS			YP/TB/15	
9	INSPECTION CHAMBERS			YP/TB/17	
10	ALLOW FOR ELECTRICAL WORKS			ITEM	
	TOTAL FOR 1 NO. ECO- TOILET BLOCK				x2
	TOTAL FOR 2 NO. ECO-TOILET BLOCKS CARRIED TO GRAND SUMMARY				

COUNTY GOVERNMENT OF KIRINYAGA

ITEM	DESCRIPTION	RATE	AMOUNT-KSHS
	<p><u>PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC</u></p> <p><u>BILL NO. 5: PROVISIONAL SUMS</u></p> <p><u>The following provisional items are to be expended only as INSTRUCTED by the PROJECT MANAGER; priced in accordance with the conditions of the contract relevant to this project and measured and valued on completion for the works or deducted in whole if not required.</u></p>		
A	<p><u>3000 Litres Bio Digester Septic Tank System</u> Kenya Shillings Five Hundred Thousand (Kshs.500,000.00) only for the construction and Installation of a Bio-Digester waste treatment system complete from the first manhole (m/s) to testing and commissioning by a Nema approved Specialist to the satisfaction of the PM.</p>	SUM	500,000.00
B	<p><u>Contigencies</u> Kenya Shillings Five Hundred (Kshs. 500,000.00) only</p>	SUM	500,000.00
	TOTAL FOR PROVISIONAL SUM CARRIED TO GRAND SUMMARY		1,000,000.00

**PROPOSED CONSTRUCTION OF 3 NO. CLASSROOMS BLOCK AND 2 NO. ECO TOILET
BLOCKS AT KIAMWATHI YOUTH POLYTECHNIC**

GRAND SUMMARY

ITEM	DESCRIPTION	PAGE	FOR BIDDER'S USE (KSHS)	FOR OFFICIAL USE (KSHS)
1	PARTICULAR PRELIMINARIES	PP/9		
2	GENERAL PRELIMINARIES	GP/13		
3	3 NO. CLASSROOMS BLOCK	YP/CR/8		
4	2 NO. ECO-TOILET BLOCKS	YP/TB/17		
5	PROVISIONAL SUMS	PS/1	1,000,000.00	
TOTAL CARRIED TO FORM OF TENDER KSHS				

AMOUNT IN WORDS. Kenya Shillings

.....

..... **Cents**

NAME OF TENDERER

Address

Signature and Date

WITNESS

Address

Signature and Date