



MAMA NGINA UNIVERSITY COLLEGE
P.O BOX 444- 01030
GATUNDU

OPEN NATIONAL TENDER

FOR

PROPOSED TUITION BLOCK PHASE (III) AT MAMA NGINA UNIVERSITY COLLEGE

TENDER NO. MNUC/T01/TB PH-III/2025-2026

CLOSING/OPENING DATE

WEDNESDAY 27TH MAY, 2026



MAMA NGINA UNIVERSITY COLLEGE

PROPOSED TUITION BLOCK PHASE (III) AT MAMA NGINA UNIVERSITY COLLEGE

TENDER DOCUMENT

W.P. ITEM NO. D1065 CE/KMB/2502 JOB NO. 11686A

PROJECT MANAGER

Works Secretary,
Ministry of Lands, Public Works, Housing & Urban Development,
State Department for Public Works,
P.O Box 30743-00100,
NAIROBI, KENYA

<u>ARCHITECT</u> Architect, Mama Ngina University College, P.O. Box 444-01030, GATUNDU, KIAMBU.	<u>QUANTITY SURVEYOR</u> Chief Quantity Surveyor, Min. of Lands, Pub Works, Housing & Urban Devel. State Department for Public Works, P.O. Box 30743-00100, NAIROBI, KENYA.
<u>STRUCTURAL ENGINEER</u> Chief Engineer (Structural), Min. of Lands, Pub Works, Housing & Urban Devel. State Department for Public Works, P.O. Box 30743-00100, NAIROBI, KENYA.	<u>MECHANICAL ENGINEER</u> Chief Engineer Mechanical (BS), Min. of Lands, Pub Works, Housing & Urban Devel. State Department for Public Works, P.O. Box 30743-00100, NAIROBI, KENYA.
<u>ELECTRICAL ENGINEER</u> Chief Engineer Electrical), Min. of Lands, Pub Works, Housing & Urban Development State Department for Public Works, P.O. Box 30743-00100, NAIROBI, KENYA.	

MAY, 2026



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Prepared by: -

Quantities and Contracts
Department, State Department for
Public Works,
P.O Box 30743-00100
NAIROBI, KENYA

The contract for the above-mentioned works entered into this day of2026 by the undersigned refers to these Bills of Quantities and the Ministry of Works General Specification dated March, 1976 (together with any amendments issued thereto) shall be read and construed as part of the said contract.

.....
CONTRACTOR

.....
THE PRINCIPAL
MAMA NGINA UNIVERSITY
COLLEGE

Date.....

Date.....

SPECIAL NOTES

- 1) The Contractor is required to check the numbers of the pages of these Bills of Quantities and should he find any missing or in duplicate or figures indistinct he must inform the Principal Mama Ngina University College at once and have the same rectified.
- 2) No liability will be admitted nor claim allowed in respect of errors in the Contractor's Tender due to mistakes in the Specifications which should have been rectified in the manner described above.

SIGNATURE PAGE AND NOTES

INVITATION TO TENDER

PROCURING ENTITY: **MAMA NGINA UNIVERSITY COLLEGE.**

CONTRACT NAME AND DESCRIPTION: **PROPOSED TUITION BLOCK PHASE (III)
AT MAMA NGINA UNIVERSITY COLLEGE.**

The Principal Mama Ngina University College invites sealed tenders for the Proposed Tuition Block Phase (III). Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours (8.00AM- 1.00PM and 2.00PM - 5.00PM local time at the Mama Ngina University College-Gatundu.

1. Tenders shall be quoted be in Kenya Shillings and shall include all taxes as per the laws of the Republic of Kenya. Tenders shall remain valid for 126 days from the date of opening of tenders.
2. All Tenders must be accompanied by a tender Security of **Kenya Shillings 1,425,000.00** in the form of an on-demand bank guarantee issued by a reputable bank located in Kenya and that is in the required format, amount that is valid for 156 days from the date of tender opening The Tenderer shall chronologically serialize all pages of the tender documents submitted.
3. Completed tenders must be delivered to the address below on or before the date and time indicated in the tender advertisement notice.
4. Tendering is open to all eligible registered appropriately with **Registrar of Companies** and **NCA Category 4** and above.
5. Bidders are required to attend a mandatory site Visit at Mama Ngina University College Gatundu South in Mutomo on the **Friday, 22nd May, 2026** strictly at **10.00 AM**. (Bidders will be issued with a Site Visit Certificate)
6. Qualified and Interested tenderers may obtain electronically from the University College website: **www.mnu.ac.ke** and the Government Tender portal Public Procurement Information Portal (PPIP) **www.tenders.go.ke**. Tender documents obtained electronically will be free of charge.
7. The Tenderer shall chronologically serialize all pages of the tender documents submitted, **One Original** and a **copy** in plain sealed envelopes clearly marked on top with Tender Reference and Description.
8. Tenders will be opened immediately after the deadline date and time specified above or any dead line date and times specified later. Tenders will be publicly opened on as per tender advertisement in the presence of the Tenderers designated representatives who choose to attend at the address below.
9. Late tenders will be rejected.
10. The addresses referred to above are:
 - A. Address for obtaining further information and for purchasing tender documents.

Address for obtaining further information

- (1) Postal Address: Mama Ngina University College

Postal Address: - P.O Box 444-01030, Gatundu.

Attn.
Head of Procurement
Tel No.:0798-352450
Email:procurement@mnu.ac.ke

B. Address for Submission of Tenders.

- (1) Name of Procuring Entity: Mama Ngina University College
Postal Address: P.O Box 444- 01030, Gatundu

Tenders to be dropped at the Tender Box;
Ground Floor Administration Block

Opening Venue: **Lecture Theatre**

Procurement Officer

For: Principal

SECTION I-TENDERING PROCEDURE

1. SECTION I - INSTRUCTIONS TO

TENDERERS A GENERAL PROVISIONS

1.0 Scope of tender

1.1 The Procuring Entity as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of lots (contracts) of this Tender Document are specified in the TDS.

1.2 Throughout this tendering document:

- a) The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, including if specified in the TDS, distributed or received through the electronic- procurement system used by the Procuring Entity) with proof of receipt;
- b) if the context so requires, “singular” means “plural” and vice versa;
- c) “Day” means calendar day, unless otherwise specified as “Business Day”. A Business Day is any day that is an official working day of the Procuring Entity. It excludes official public holidays.

2.0 Fraud and corruption

2.1 The tenderer shall not engage in any corrupt or fraudulent practice and if found to have done so shall be disqualified.

3.0 Eligible tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter in to such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender.

4.0 Tenderer's responsibilities

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

4.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine and inspect 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 the tenderer's own expense.

- 4.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the examination and inspection.

B. CONTENTS OF TENDER DOCUMENTS

5.0 Sections of Tender Document

- 5.1 The tender document consists of Parts specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 7.0.

Tendering Procedures

Instructions to Tenderers

Tender Data Sheet (TDS)

Evaluation and Qualification Criteria Section

Tendering Forms

Conditions of Contract and Contract Forms

General Conditions (GCC)

Special Conditions of

Contract Forms

- 5.2 The Invitation to Tender Notice issued by the Procuring Entity is not part of the Contract documents. Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 6.0. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

- 5.3 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.

6.0 Clarification of Tender Document, Site Visit, Pre-tender Meeting

A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the TDS or raise its enquiries during the pre-Tender meeting if provided for in accordance. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the TDS prior to the deadline for submission of tenders.

- 6.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and

examine and inspect the site(s) of the required contracts and obtain all information that may be necessary for preparing a tender. The costs of visiting the Site shall be at the Tenderer's own expense. The Procuring Entity shall specify in the TDS if a pre-arranged Site visit and or a pre- tender meeting will be held, when and where. The Tenderer's designated representative is invited to attend a pre-arranged site visit and a pre-tender meeting, as the case may be. The purpose of the site visit and the pre-tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

6.2 The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the TDS before the meeting.

7.0 Amendment of Tender Documents

7.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tender Documents by issuing addenda.

7.2 Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity.

7.3 To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend the dead line for the submission of Tenders.

C. PREPARATION OF TENDERS

8.0 Cost of Tendering

The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

9.0 Language of Tender

The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

10.0 Documents Comprising the Tender

11.0 The Tender shall comprise the following:

- a) Form of Tender;
- b) Schedules including priced Bill of Quantities,
- c) Tender Security;
- d) Alternative Tender, if permissible;
- e) Any other document required in the TDS.

11.1 T e n d e r s submitted by a JV shall include a copy of the Joint Venture Agreement

entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.

12.0 Alternative Tenders

12.1 Unless otherwise specified in the TDS, alternative Tenders shall not be considered.

12.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the TDS, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

13.0 Tender Prices and Discounts

13.1 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

13.2 The price to be quoted in the Form of Tender shall be the total price of the Tender, including any discounts offered.

13.4 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

14.0 Currencies of Tender and Payment

14.1 The currency(ies) of the Tender and the currency(ies) of payments shall be the same.

14.2 Tenderers shall quote entirely in Kenya Shilling. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya Shilling.

14.3 Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data in the Appendix to Tender are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

15.0 Documents Comprising the Technical Proposal

The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information, Tender Forms, insufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

16.0 Documents Establishing the Eligibility and Qualifications of the Tenderer

16.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility.

16.2 In accordance with the Evaluation and Qualification Criteria, Tenderer shall provide the information requested in this tender.

17.0 Period of Validity of Tenders

17.1 Tenders shall remain valid for the Tender Validity period specified in the TDS. At tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

17.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing.

18.0 Tender Security

The Tenderer shall furnish as part of its Tender a Tender Security as specified in the TDS, in original form, and in the amount and currency specified in the TDS.

19.0 Format and Signing of Tender

The Tenderer shall prepare one original of the documents comprising the Tender clearly mark "ORIGINAL." Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

- a) The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer.
- b) In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- c) Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

1. D. SUBMISSION AND OPENING OF TENDERS

20.0 Sealing and Marking of Tenders

- a) The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date.

21.0 Deadline for Submission of Tenders

- a) Tenders must be received by the Procuring Entity at the address specified in the

TDS and no later than the date and time also specified in the TDS.

- b) The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders.

22.0 Late Tenders

The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders.

23.0 Tender Opening

The Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the TDS, in the presence of Tenderers' designated representatives who chooses to attend.

First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid

authorization to request the withdrawal and is read out at Tender opening.

24.0 EVALUATION AND COMPARISON OF TENDERS

24.1 Confidentiality

- a) Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers.
- b) Any effort by a Tenderer to influence the Procuring Entity in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

25.0 Determination of Responsiveness

- a) The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself.
- b) If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

26.0 Arithmetical Errors

- a) The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.
- b) Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis: -

- c) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
- d) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
- e) if there is a discrepancy between words and figures, the amount in words shall prevail.
- f) Tenderers shall be notified of any error detected in their bid during the notification of award.

27.0 Nominated Subcontractors

- a) Unless otherwise stated in the TDS, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. In case the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- b) Tenderers may propose sub-contracting up to the percentage of total value of contracts or the volume of works as specified in the TDS. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.
- c) Domestic subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated so by the Procuring Entity in the TDS a scan be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

28.0 Evaluation of Tenders

- a) The Procuring Entity shall use the criteria and methodologies listed in this document. No other evaluation criteria or methodologies shall be permitted.

29.0 Comparison of tenders

The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders to determine the Tender that has the lowest evaluated cost.

30.0 Lowest evaluated tender

Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Lowest Evaluated Tender. The Lowest Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) the lowest evaluated price.

31.0 Procuring entity's right to accept any tender, and to reject any or all tenders.

The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without there by incurring any liability to Tenderers. In case of annulment, all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. AWARD OF CONTRACT

31.0 Award criteria

The Procuring Entity shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

32.0 Notice of Intention to Enter into a Contract/Notification of Award

Upon award of the contract and prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract/Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;
- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (b) above already reveals the reason;
- d) the expiry date of the Standstill Period; and
- e) instruction son how to request a debriefing and/ or submit a complaint during the stand still period.

33.0 Stand still Period

- a) The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.
- b) Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

34.0 Letter of Award

Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period, upon addressing a complaint that has been filed with in the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

35.0 Signing of Contract

- a) Upon the expiry of the fourteen days of the Notification of Intention to enter in to contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.
- b) Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- c) The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

36.0 Performance Security

- a) Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the TDS, in accordance with the General Conditions of Contract.
- b) Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the TDS or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.

TENDER DATA SHEET (TDS)

The following specific data shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

<u>SECTION II – Tender Data Sheet (TDS)</u>	
The following specific data shall complement, supplement or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in the ITT.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
A. GENERAL	
ITT1.1	The Name of the Contract is: PROPOSED TUITION BLOCK PHASE (III) AT MAMA NGINA UNIVERSITY COLLEGE- GATUNDU The Reference Number of the Contract is: W.P. ITEM NO. D1065 CE/KMB/2502 JOB NO. 11686A The Number and Identification of Lots (Contracts) Comprising this Tender are: None
ITT2.3	The Information Made Available on Competing Firms is as Follows a. Bills of Quantities b. Drawings
ITT2.4	The firms that provided consulting services for the contract being tendered for are: STATE DEPARTMENT FOR PUBLIC WORKS, P.O BOX 30743 – 00100 NAIROBI; The Roles are defined as follows- Project Manager - Works Secretary Architect – Architect, Mama Ngina University College Quantity Surveyor – Chief Quantity Surveyor Electrical Engineer – Chief Electrical Engineer Structural Engineer – Chief Structural Engineer Mechanical Engineer – Chief Mechanical Engineer (B.S)
ITT3.1	Maximum Number of Members in the Joint Venture (JV) shall: be Two
B. CONTENTS OF TENDER DOCUMENT	
ITT7.1	The Tenderer will submit any request for clarifications in writing at the address: <u>www.mnu.ac.ke</u> To reach the Procuring Entity no later than: <u>25th May, 2026</u> The Procuring Entity shall publish its response at the website: <u>www.mnu.ac.ke</u>
ITT7.2	A pre-arranged pretender site visit shall take place on Friday 22nd May, 2026 at 10.00 AM Date: 22-05-2026 Time: 10.00 am A pre-tender meeting SHALL take place at the date as indicated above
ITT7.3	The tenderer will submit any question in writing to reach the procuring entity not later than <u>25th May, 2026</u> before the meeting.
ITT7.5	The procuring entity’s website where minutes of the pre-tender meeting and the pre-arranged pretender will be published is <u>www.mnu.ac.ke</u>

ITT9.1	<p>For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is:</p> <p>(i) Name of Procuring Entity- Mama Ngina University College-Gatundu</p> <p>(ii) Physical address for hand Courier Delivery to an office or Tender Box (City, Street, Building, Floor Number and Room)</p> <p>(iii) Postal Address P.O Box 444- 0130, Gatundu</p> <p>(iv) Insert name, telephone number and e-mail address of the officer to be contacted: <i>Principal, Mama Ngina University College P.O Box 444- 01030, Gatundu.</i></p>
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C. PREPARATION OF TENDERS

ITT11.1 (h)	<p>The Tenderer shall submit the following additional documents in its Tender:</p> <ol style="list-style-type: none"> 1. Evidence of Personnel Academic & Professional Qualifications 2. Evidence of completed projects of similar nature, complexity or magnitude 3. Evidence of ongoing projects of similar nature, complexity or magnitude 4. Proof / Evidence of Ownership for all the relevant equipment and transport 5. Audited Financial Reports for the last three (3) years (2025, 2024 & 2023) 6. Evidence of Financial Resources (Cash in hand, lines of credit, overdraft etc)
ITT13.1	Alternative tenders shall not be considered
ITT13.2	Alternative times for completion shall not be permitted
ITT13.2	Alternative technical solutions shall not be permitted
ITT14.5	The prices quoted by the Tenderer shall be fixed
ITT15.2(a)	Foreign currency requirements not allowed.
ITT18.1	The tender validity period shall be 126 days.
ITT18.3	<p>(a) The Number of days beyond the expiry of the initial tender validity period will be 30 days.</p> <p>(b) The Tender price shall be adjusted by the following percentages of the tender price:</p> <ol style="list-style-type: none"> i. <i>By 0% the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension, and</i> ii. <i>By 0%, the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.</i>
ITT19.1	Tender shall provide Tender Security . The type of Tender security shall be Bank Guarantee in the amount equivalent to Kshs. 1,425,000.00.
ITT20.1	In addition to the original of the tender, the number of copies is <i>(as indicated in the tender advertisement)</i>
ITT20.3	The written confirmation of authorization to sign on behalf of the tenderer shall consist of a written power of attorney
D. SUBMISSION AND OPENING OF TENDERS	
ITT22.1	For tender submission purposes only, the Procuring Entity's address is:

	<p>(1) Name of Procuring Entity: Mama Ngina University College, Postal Address: P.O Box 444- 01030, Gatundu</p> <p>(2) Physical address for hand Courier Delivery to an office or Tender Box (City, Street, Building, Floor Number and Room) <i>Principal, Mama Ngina University College P.O Box 444- 01030, Gatundu.</i></p> <p>(3) Date and time for submission of Tenders. Tenders shall be submitted on Wednesday <i>27th May, 2026 at 11.00 AM.</i></p>
ITT25.1	<p>The Tender opening shall take place at the time and the address for Opening of Tenders Provided below:</p> <p>1) Name of Procuring Entity: <i>Mama Ngina University College-Gatundu ; Postal Address: P.O Box 444- 01030, Gatundu</i></p> <p>2) Physical address for hand Courier Delivery to an office or Tender Box: <i>Principal, Mama Ngina University College P.O Box 444- 01030, Gatundu..</i></p> <p>3) State date and time of tender opening. <i>27th May, 2026 at 11.00 AM.</i></p>
ITT25.1	<p>If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures specified below</p> <p style="text-align: center;">N/A</p>
ITT25.5	<p>The number of representatives of the Procuring Entity to sign is: <u><i>as directed by procuring entity</i></u></p>
E. EVALUATION AND COMPARISON OF TENDERS	
ITT30.3	<p>The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.</p>
ITT33.2	<p>A margin of preference shall NOT apply.</p>
ITT33.4	<p>The invitation to tender is extended to the following group that qualify for Reservations</p> <p style="text-align: center;">N/A</p> <p><i>(These groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be; describe precisely which group qualifies).</i></p>
ITT34.1	<p>At this time, the Procuring Entity <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance.</p>
ITT34.2	<p>Contractors may propose subcontracting: Maximum percentage of subcontracting permitted is (10% of the total contract amount). Tenderers planning to subcontract more than 10% of total volume of work shall specify, in the Form of Tender, the activity (ies) or parts of the Works to be sub contracted along with complete details of the subcontractors and their qualification and experience.</p>
ITT34.3	<p>The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows:</p> <ol style="list-style-type: none"> 1. <i>Electrical Works</i> 2. <i>Mechanical Works</i>

	For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation.
ITT35.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT48.1	Other documents required in addition to the Performance Security are; Insurance for works.
ITT50	<p>The procedures for making a Procurement-related Complaint are detailed in the "Notice of Intention to Award the Contract" herein and are also available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available that is by hand either delivery or email to; - www.mnu.ac.ke</p> <p>For the attention: <i>Mama Ngina University College</i> Title/position: <i>Principal</i> Procuring Entity: <i>Mama Ngina University College</i> Email address: <i>www.mnu.ac.ke</i></p> <p>In summary, a Procurement-related Complaint may challenge any of the following (among others):</p> <ul style="list-style-type: none"> (i) the terms of the Tender Documents; and (ii) the Procuring Entity's decision to award the contract

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

10 AWARD CRITERIA

The Procuring Entity shall use the criteria and methodologies listed in this Section to evaluate tenders and arrive at the Lowest Evaluated Tender. The tender that (i) meets the qualification criteria, (ii) has been determined to be substantially responsive to the Tender Documents, and (iii) is determined to have the Lowest Evaluated Tender price shall be selected for award of contract.

- (1) Preliminary Evaluation
- (2) Technical Evaluation
- (3) Financial Evaluation
- (4) Recommendation for award

STAGE I-PRELIMINARY EVALUATION

The Tenderer shall be required to submit the following:

MAIN CONTRACTOR

ITEM	MANDATORY REQUIREMENTS (MR)	YES OR NO
MR1	Valid Copy of certificate of incorporation/ Registration. (Certified by an advocate)	
MR2	Valid Current Tax Compliance Certificate issued by Kenya Revenue Authority	
MR3	Current National Construction Authority Registration Certificate (NCA 4 in Building Works and NCA 6 for Domestic Subcontractors;	
MR4	Provide Current National Construction Authority Annual Contractors Practicing License for both the Main Contractor and Domestic Subcontractors	
MR5	Dully filled and signed Confidential business questionnaire	
MR6	Submit tender security equivalent to Kshs. 1,425,000.00 of the tender sum in the form of an on-demand bank guarantee issued by a reputable bank located in Kenya. Addressed and bound to the Principal- Mama Ngina University College, that is in the required format, amount, from a reputable bank and that is valid for 156 days from the date of tender opening.	
MR7	Valid Copy of Current Single Business permit (Certified by an advocate)	
MR8	Submission of valid CR12 form showing the list of directors /shareholding (issued within the last 6 months) or National Identity Card(s) for Sole Proprietorship/ Partnership	
MR9	Submission of original tender document (including supportive document) properly TAPE BOUND and paginated in the correct sequence and all pages must be initialled/signed/stamped. NB: Spiral Binding and use of Spring or Box Files will not be allowed and will result in automatic disqualification.	
MR10	Letter of authority to seek references from the Tenderer's bankers.	
MR11	Provide proof of Power of attorney.	

MR12	Submit certified copies of Audited accounts (Signed by Auditors and directors) for the last three (3) years (2023,2024 and 2025) (Certified by an advocate)	
MR13	Must fill and submit the Self-declaration form that the person/tenderer is not debarred in the matter of the Public Procurement and Asset Disposal Act 2015 in the format provided - Form SD1.	
MR14	Must fill and submit the Self-declaration that the person/tenderer will not engage in any corrupt or fraudulent practice in the format provided - Form SD2	
MR15	Must fill and submit Declaration and Commitment to The Code of Ethics in the format provided	
MR16	Domestic Contractor's Agreement- A duly signed and stamped Agreement dated within the period of tender for this works between the Main contractor and the <ul style="list-style-type: none"> a) Electrical Installation works subcontractor b) Mechanical Installation Works Subcontractor Stating that if the main contractor is awarded the contract, he shall work with the firms as their domestic subcontractors The agreement must be witnessed by an attorney/advocate (Not necessary if the main contractor is registered for specialist work)	
	<p>NB:</p> <ul style="list-style-type: none"> • <i>The criteria for the subcontract bids shall be referred from the Mechanical and Electrical folios respectively.</i> • Bidders who do not satisfy any of the above requirements shall be considered non responsive and their tenders will not be evaluated further. • <i>Preliminary Evaluation</i> for the proposed specialist works listed under ITT 34.3 to be as <i>contained in this volume</i> as per the section below. • Order of evaluation of works will be as follows: <ul style="list-style-type: none"> a) Preliminary evaluation of Main Works b) Preliminary Evaluation of Electrical Installation Works and Mechanical Installation Works c) Technical Evaluation of Main Works (Qualification Form) d) Technical Evaluation of Electrical & Mechanical Works and Financial Evaluation 	

ELECTRICAL SUB-CONTRACTOR

S/No	PRELIMINARY EVALUATION CRITERIA / MANDATORY REQUIREMENTS	YES/NO
	ELECTRICAL Installation Works	
MR1	Company Certificate of incorporation/registration;	
MR2	Valid Tax Compliance Certificate;	
MR3	Current certificate of Registration with National Construction Authority (NCA 6 and above) in Electrical & ICT Installation Works;	
MR4	Current and Valid NCA contractor's practicing license	
MR5	Current and Valid License with the Energy and Petroleum Regulatory Authority (EPRA) in Class B and above in Solar, Elect	
	Data and Voice Installation Works	
MR6	Company Certificate of incorporation/registration;	
MR7	Valid Tax Compliance Certificate;	
MR8	Valid Communication Authority registration license as a telecommunication contractor	
MR9	Valid Communication Authority compliance certificate as a telecommunication contractor	
MR 10	Manufacturer's Authorization Letter for the CCTV Cameras, NVR and Network Switches being offered by the bidder.	
MECHANICAL SUB-CONTRACTOR		
S/No	MANDATORY REQUIREMENTS(MR)	
MR1	Valid Copy of certificate of incorporation/ Registration.	
MR2	Valid Current Tax Compliance Certificate - Statement of tax compliance from Bidding Company, and if Consortium, from each member of the consortium.	
MR3	Valid CR12 form showing the list of directors /shareholding (issued within tendering period) or National Identity Card(s) for Sole Proprietorship / Partnership	
MR4	Valid copy of NCA Registration Certificate, NCA 6. and above in: Mechanical Building Services Installations; 1. Air-conditioning and Mechanical Ventilation systems AND Plumbing and Drainage Installations	
MR5	Valid annual contractors practicing license from NCA for works listed in MR4	
MR6	Valid Manufacturers Authorization Certificate from a Manufacturer of a reputable brand with comprehensive local dealership for Variable Refrigerant Volume (VRV) Air-conditioning	
MR7	Dully filled, signed & stamped form of tender	

MR8	Dully filled signed and stamped Confidential business questionnaire	
MR9	Valid Copy of Current Single Business permit	
MR10	Tenderers shall submit One Original and One Copies of the completed tender document in one packages/Envelope.	
MR11	Dully filled, signed and stamped Certificate of Independent Tender Determination	
MR12	Dully filled, signed and stamped Self-Declaration Forms SD1	
MR13	Dully filled, signed and stamped Self-Declaration Form SD2 (Corruption or Fraudulent Practices)	
MR14	Tenderers Information Form ELI -1.1 and form ELI 1.2 [For JV Partners] dully filled, signed and stamped.	
MR15	Certified copies of Audited accounts (Signed by Auditors and directors for the last three (3) years (2023, 2024& 2025). (Certified by an advocate).	

STAGE 2 QUALIFICATION FORM / TECHNICAL EVALUATION.

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
1	Nationality	Nationality in accordance with ITT 3.6.	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by Kenya Revenue Authority in accordance with ITT 3.14.	Attachment	
3	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.7	Form of Tender	Not applicable in Foreign Country
4	State- owned Enterprise	Meets conditions of ITT 3.8	Forms ELI – 1.1 and 1.2, with attachments	
5	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI – 1.1 and 1.2, with attachments	
6	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1 st January 2020	Form CON-2	
7	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender	

1 Item No.	2 Qualification Subject	3 Qualification Requirement	4 <i>Document To be Completed by Tenderer</i>	5 <i>For Procuring Entity's Use (Qualification met or Not Met)</i>
8	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
9	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1 st January 2020	Form CON – 2	
<p>1. Non performance, as decided by the Employer, shall include all contracts where</p> <ol style="list-style-type: none"> a. nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and b. contracts that were so challenged but fully settled against the contractor. c. Non performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. d. Non performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted. <p>2. This requirement also applies to contracts executed by the Bidder as JV member.</p>				
11	Financial Capabilities	(i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as KSH. 29,000,000.00 for the subject contract(s) net in Kenya Shillings of the Tenderer's other	Form FIN – 3.1, with attachments	

1 Item No.	2 Qualification Subject	3 Qualification Requirement	4 <i>Document To be Completed by Tenderer</i>	5 <i>For Procuring Entity's Use (Qualification met or Not Met)</i>
		<p>commitments.</p> <p>(ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.</p> <p>(iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last [3] years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability. <i>Attach evidence in form of letter from bank, overdraft facility, current bank statements for the last 6 months)</i>_____</p>		
12	Average Construction Turnover	Minimum average construction turnover of KSH. 250,000,000.00 equivalent calculated as total certified payments received for contracts in progress and/or completed within the last 3 years, divided by 3 years <i>Attach evidence in form of audited accounts serialized on every page; duly signed and stamped by a registered auditor /audit firm.</i>	Form FIN – 3.2	
13	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor starting 1 st January 2022. A minimum number of 3 contracts Provide	4. Form EXP – 4.1 Experience	

1 Item No.	2 Qualification Subject	3 Qualification Requirement	4 <i>Document To be Completed by Tenderer</i>	5 <i>For Procuring Entity's Use (Qualification met or Not Met)</i>
		Completion certificates/ Recommendation letter		
14	Specific Construction & Contract Management Experience	<p>A minimum number of 3 similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1st January 2022 and tender submission deadline i.e. ....3 (contracts, each of minimum value of KSH.58,000,000.00 equivalent.</p> <p>[Bidders shall attach copies of the following:</p> <ul style="list-style-type: none"> a) Letters of Award b) Signed Contract and c) Completion Certificate for the respective projects. d) For Completed projects provide Recommendation letter from clients or consultants <p>If project is ongoing, it must be at least 80% complete. Bidder to attach copies of interim payment certificates the similarity of the contracts shall be based on the following: <i>[Based on Section VII, Scope of Works, specify the minimum key requirements in terms of physical size, complexity, construction method, technology and/or other characteristics including part of the requirements that may be met by specialized subcontractors, if permitted in accordance with ITT 34.3]</i></p>	Form EXP 4.2(a)	

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
1. Equipment				
15	Contractors key equipment	1)Aluminum Cutter – One (1)	Form EQU: Equipment	Form EQU: Equipment
		2)15 Tonn Tipper Lorry- One (1)	Form EQU: Equipment	
		3) Pick-ups- Two (2)	Form EQU: Equipment	
			Form EQU: Equipment	
		<p>Notes If the equipment is owned, must provide CLEAR copies of logbook or proof of ownership.</p> <p>If equipment is hired or leased Provide a commitment letter from the lessor of the equipment addressed to</p> <p>Principal, Mama Ngina University College P.O Box 444- 01030, Nairobi, indicating that the lessor shall avail the equipment upon award of the tender and submit a copy of a written agreement to lease between lessee and lessor indicating list of equipment and their corresponding copies of log books or proof of ownership by lessor;</p> <ul style="list-style-type: none"> • The equipment listed shall be available on site when required 		

Item No.	Qualification Subject	Qualification Requirement	<i>Document To be Completed by Tenderer</i>	<i>For Procuring Entity's Use (Qualification met or Not Met)</i>
2. Key Personnel				
16	Contractor's Representative and Key Personnel	<p>a) Project Manager <u>Minimum qualifications and technical experience</u></p> <ol style="list-style-type: none"> 1. Bachelor's degree in Architecture, Quantity Surveying, Construction Management or Civil / Structural Engineering. 2. Registered Professional with the respective registration bodies with a valid practicing license - 3. General Experience –10 years. 4. Specific experience on Construction of building works – 8 years. <p>b) 1 No. Site Agents <u>Minimum qualifications and technical experience</u></p> <ol style="list-style-type: none"> 1. Higher Diploma in Building Construction or equivalent. 2. Specific experience on Construction of building works – 10 years. <p>c) Foreman <u>Minimum qualifications and technical experience</u></p> <ol style="list-style-type: none"> 1. Certificate- Building Construction, Electrical, Mechanical 2. Experience – 5 years 	Form PER -1 & Form PER -2	

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		<p>d) Artisans 2No. <u>Minimum qualifications and technical experience</u> 1 Trade Test certificate in relevant field 2 Experience-5 years.</p> <p>e) Occupational Health and Safety Personnel <u>Qualifications and technical experience</u> 1. Certificate- Occupational Safety and Health 2. Experience – 5 years</p> <p>Note: Certified copies of certificates to be provided as evidence and also Identification cards</p>		
17	Work Methodology and Programme of Works	1) Provided a detailed Work Methodology: Procedure on execution of activities as outlined in the BoQs. 2) Provide a detailed Work programme on A3 using Microsoft Project 3) Detailed Cashflow Projections		

Note: Any tender that does meet the above requirements shall be disqualified

MAIN CONTRACTOR

Evaluation of the Main Contractor/ Tenderer Submitting the Tender and her Domestic Sub- Contractors Where Applicable

No.	Description	Maximum Score
TR-1(a)	<p>Experience of the firm in similar works: - For Main Contractor/Tenderer submitting the tender document Provide Three (3) Assignments of Building and Construction of similar nature- awarded to the firm between the Periods of 2020 to 2025 calendar year. Attach copies of;</p> <ol style="list-style-type: none"> 1. Complete dully signed contracts/Local service Orders 2. Practical Completion Certificates of the above submitted contracts. 3. Each with Kshs. 30 million and above - (10 Marks each max of 30) 4. Each with Kshs. 20M – to below 30 million (each 7.5 Marks) 5. Each with Ksh 10 M – to below 20 M (5.5 Marks each) <p>The above information Must be provided in the format in section IV Tendering forms.</p> <ul style="list-style-type: none"> • Form Exp – 4.2 (a) General Construction Experience • Form Exp – 4.2 (b) Construction Experience in Key Activities. 	30
TR1(b)	<p>On-going projects including Sub/Contracts – (Attach Proof – Submit duly sworn affidavit)</p> <ol style="list-style-type: none"> 1. No Project of similar nature, complexity and magnitude-----5Marks 2. Two and below Projects of similar, nature complexity and magnitude -----2 Marks 3. Four and above Projects of similar nature, complexity and magnitude----- 1 Mark <p>The above information to be provided in Form Fin – 3.4 Work Commitment</p>	5
TR- 2	<p>Qualification and Experience of the Staff</p> <p>A) Director of the firm Academic Qualification (attach proof i.e. copies of certificates) The above information to be provided in FORM PER - 1: Contractor's Representative and Key Personnel.</p> <ol style="list-style-type: none"> 1. Holder of degree -----5 Marks 2. Holder of diploma ----- 3.5 Marks 3. Holder of craft certificate -----2 Marks 4. Holder of KCSE/ O Level Certificate -----1 Mark 5. No certificate-----0 Mark <p>Experience</p> <ol style="list-style-type: none"> 1. Over 3 years ----- 3 Marks 2. Between one and 3 years ----- 1 mark <p>The above information to be provided in FORM PER - 2: Resume and Declaration - Contractor's Representative and Key Personnel. Form PER- 1</p>	8

	<p>b) At least Three (3) other technical staff.</p> <p>Academic Qualification (attach proof i.e. copies of certificates) The above information to be provided in FORM PER - 1: Contractor's Representative and Key Personnel.</p> <ol style="list-style-type: none"> 1. Holder of degree/ higher diploma in Building, Electrical and Mechanical Engineering Construction Related Field ----- (Max Marks 9 – 3 Marks each) 2. Holder of diploma in Building, Electrical and Mechanical Engineering Construction Related Field) ----- (Max Marks 6 -2 Marks each) 3. Holder of certificate holder in Building, Electrical and Mechanical Engineering Construction Related Field) -----(Max Marks 3 -1 Mark each) 	18
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No.	Description	Maximum Score
	<p><u>Experience</u></p> <ol style="list-style-type: none"> 1. Building, Mechanical Engineer and Electrical Engineer over 3 years -----3 Marks each. 2. Building, Mechanical Engineer and Electrical Engineer between one and 3 years-----2 marks each 3. Building, Mechanical Engineer and Electrical Engineer below 1 year -----0 marks <p>The above information to be provided in FORM PER - 2: Resume and Declaration - Contractor's Representative and Key Personnel.</p>	
	<p>c)At least Three (3) artisans</p> <p>Academic Qualification (attach proof i.e. copies of certificates) The above information to be provided in FORM PER - 1: Contractor's Representative and Key Personnel.</p> <ol style="list-style-type: none"> 1. Trade test certificate in relevant field -----Max. Marks 3- 1 Mark each <p><u>Experience</u></p> <ol style="list-style-type: none"> 1. Building, Mechanical Engineer and Electrical Engineer over 3 years ----- ---1 Marks each. 2. Building, Mechanical Engineer and Electrical Engineer between one and 3 year-----0.5 mark each <p>The above information to be provided in: - The above information to be provided in FORM PER - 2: Resume and Declaration - Contractor's Representative and Key Personnel.</p>	6
TR 3	<p>1. Adequacy of tools and equipment: (The Bidder must demonstrate that it will have access to the key Contractor's equipment listed hereafter)- The Tenderer must provide proof of evidence of ownership/lease and fill Form EQU-Equipment for each item/equipment provided</p>	3

	<p>a. Transportation Main Contractor</p> <p>At least 3 no (1 Mark for each max 3)</p> <ol style="list-style-type: none"> i. pick- ups ii. Lorries iii. Trucks iv. Hoist/scaffolding v. Tractor or any other relevant mode of transport. 	
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No.	Description	Maximum Score
	<p>b) Relevant Tools and Equipment - at least 5 no (1 Mark for each max 5)</p> <ul style="list-style-type: none"> • Concrete Mixer • Electrical tools, • Mechanical tools, • Concrete cutting tools, • Compactor 	5
TR 4	<p>Financial Report (Main Contractor/Tenderer submitting the tender document)</p> <p>a) Average Annual Turnover (From Audited Accounts for the last 3 years -, (2023, 2024 & 2025)</p> <ul style="list-style-type: none"> • Average Annual Turn-over of Kshs 150,000,000.00 ....10 Marks • Average Annual of Kshs 100,000,000.00 .....7.5 Marks • Average Annual of Kshs 75,000,000.00 5 Marks • Average Annual of Kshs 50,000,000.00 2.5 Marks <p>The above information Must be provided in Form FIN – 3.2 and should be in tandem with the Audited Accounts provided.</p> <ul style="list-style-type: none"> • Failure to submit audited accounts ----- 0 Mark 	10
TR 5	<p>Provide copies of audited accounts for the Main Contractor/Tenderer submitting the tender for the accounting years 2023, 2024, 2025 indicating/showing the 2023, 2024 and 2025 financial results.</p> <ul style="list-style-type: none"> • Attach copies of financial statements/Audited accounts (balance sheets, including all related notes, and income statements) for the years required above complying with the following conditions: • Must reflect the financial situation of the Tenderer or member to a JV, and not sister or parent companies. • Historic financial statements (2025, 2024 & 2023 accounts) must be audited by a certified accountant. - Registration Number/Practicing Number of the accountant must be clearly shown • Historic financial statements must be complete, including all notes to the financial statements. 	10

No.	Description	Maximum Score
	<p>Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be accepted).</p> <p>Current ratio 2:1 – Current Assets/Current Liabilities</p> <p>Must also dully fill the below listed Forms:-</p> <ul style="list-style-type: none"> • FORM FIN – 3.1 Financial Situation and Performance • FORM FIN – 3.3 Financial Resources <p>Note: Failure to meet any of the above requirements leads to 0</p>	
TR 6	<p>Works Programme</p> <p>Describe the step-by-step approach of accomplishing the key tasks of the assignment</p> <ul style="list-style-type: none"> • Within 6 Months ----- 5 Marks • Within 8 Months ----- 3 Marks • Within 10 Months ----- 2 Marks <p>Note: The works programme should be technically realistic and the tenderer shall demonstrate how she will deliver the project within the proposed timelines without compromising on the quality.</p>	5
Total		100%
Pass Mark		70%

Any bidder who scores **70%** and above shall be considered for further evaluation Notes on evaluation.

ELECTRICAL SUB CONTRACTOR

The award of points considered in this section shall be as shown below:

The detailed scoring plan shall be as shown in table 1.

TABLE 1: Technical Evaluation

Item	Description	Points Scored	Max. Point
1	<p>Compliance with Technical Specifications</p> <ul style="list-style-type: none"> • Compliant -----40 • Non-compliant----- 0 <p>Note: 1)Tender Evaluation Committee to evaluate compliance to all technical specifications as detailed in this document 2)Non-compliance to any of the specifications shall render the whole tenderer non-compliant</p>		40
2	<p>Tender Questionnaire Form</p> <ul style="list-style-type: none"> • Completely filled ----- 5 • Not filled ----- 0 		5
	<p>b) Relevant Equipment</p> <ul style="list-style-type: none"> • Has relevant equipment for work being tendered as listed below -----12 • No relevant equipment for work being tendered ----- 0 <p>Relevant equipment for the works being tendered for</p> <ol style="list-style-type: none"> i. Motor and Phase Rotation Indicator ii. Digital Earth Loop Tester iii. Insulation Continuity Tester iv. Digital Earth Resistance Tester v. Multimeter and Clamp Meter vi. Electrician 's Tool Kit <p>Attach Evidence</p>		12
3	Key Personnel (Attach evidence)		
	<p>Director of the firm</p> <ul style="list-style-type: none"> • Holder of degree in relevant Engineering field ----- 5 • Holder of diploma in relevant Engineering field ----- 4 • Holder of certificate in relevant Engineering field-----3 • Holder of trade test certificate in relevant Engineering field-----2 • No relevant certificate -----0 		5
	<p>At least 1No. degree/diploma holder of key personnel in relevant field</p> <ul style="list-style-type: none"> • With over 10 years relevant experience ----- 4 • With over 5 years relevant experience----- 2 • With under 5 years relevant experience ----- 1 		4
	<p>At least 1No certificate holder of key personnel in relevant field</p> <ul style="list-style-type: none"> • With over 10 years relevant experience----- 2 • With over 5 years relevant experience ----- 1 • With under 5 years relevant experience -----0.5 		2
	<p>At least 1No artisan (trade test certificate in relevant field)</p> <ul style="list-style-type: none"> • Artisan with over 10 years relevant experience ----- 2 • Artisan with under 10 years relevant experience ----- 1 • Non skilled worker with over 10 years relevant experience --- 0 		2
	TOTAL		70

Any bidder who scores 50 points and above shall be considered for further evaluation.

COMPLIANCE TO TECHNICAL SPECIFICATIONS

Tenderers shall submit offers that comply with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications.

Tenderers shall be required;

- a) On compliance with Technical Specifications, bidders shall supply equipment/items that comply with the technical specifications set out in the bid document. In this regard, the bidders will be required to submit relevant technical brochures/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/model of the proposed items. Such brochures/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:*
 - (i) Standards of manufacture;*
 - (ii) Performance ratings/characteristics/ features;*
 - (iii) Material of manufacture;*
 - (iv) Electrical power ratings; and*
 - (v) All other requirements as indicated in the technical specifications of the bid.*

The bid will then be analyzed, using the information in the technical brochures, to determine compliance with key technical specifications for the works/items as indicated in the tender document.

The tenderer shall fill in the Technical Schedule as specified in the tender document for Equipment and Items indicating the Model/Make/Manufacturer and catalogue numbers of the Items/Equipment they propose to supply.

Bidders not complying with any of the key technical specifications shall be considered noncompliant to the technical specifications while those meeting all the key technical specifications shall be considered compliant.

Compliance in this section shall be as shown below:

Description	COMPLIANT / NON-COMPLIANT
<p>Compliance with Technical Specifications <i>(Note:</i> <i>1) Tender Evaluation Committee to evaluate compliance to all technical specifications for all the Electrical Services Installation Works as detailed in the Particular specifications of this document</i> <i>2) Bidders who do not highlight catalogue number and model of the proposed items shall be considered non-compliant.</i> <i>3) Non-compliance to any of the specifications shall render the whole system non-compliant</i></p>	

MECHANICAL SUB-CONTRACTORS

At this stage technical evaluation shall be done by comparing each tender to the technical requirements in the tender document.

No	DESCRIPTION	SCORE	
1.	Key Personnel experience (Max 38 marks) Qualification –Relevant engineering fields; Mechanical Engineering/ Air-conditioning or Mechanical Ventilation The following is required for Evaluation (<i>All academic documents must be certified by commissioner of oaths or an advocate of the High Court</i>)	Max.38	
a.	<ul style="list-style-type: none"> i. Key personnel schedule ii. Certified CVs. iii. Certified Academic certificates. 		
b.	Site Manager <ul style="list-style-type: none"> • Holder of degree in relevant Engineering field ---- 10 • Holder of diploma in relevant Engineering field -- 5 	Score	Max
			10
c.	Site Supervisor –a degree/diploma holder in relevant field <ul style="list-style-type: none"> • With over 10 years’ relevant experience -----10 • With over 5 years’ relevant experience-----5 • With under 5 years relevant experience -----3 		10
	Experience of Site Manager <ul style="list-style-type: none"> • Degree holder with above 3 yrs. experience (any experience below 3 yrs. give 0 marks) -----10 • Diploma holder with above 3 yrs. experience (any experience below 3 yrs. give 0 marks) ----- 8 		10
d.	<ul style="list-style-type: none"> • Foreman (Minimum qualification is artisan in related engineering field) –4 Marks. (2 marks for certificates, 2 marks for C.V) • Plumber – 1 Marks (attach CV) • Welders– 1 Marks (attach CV) • HVAC Technician – 1 Mark (attach CV) • Safety officers/Marshals – 1Mark (Attach CV) 		8
2.	PLANT AND EQUIPMENT <i>(For item (a) and (b) below Attach certified copies of Log books and other evidence of ownership. Cash receipts shall bear name of bidder. For leases, proof of leasing agreement required certified by commissioner of oaths. For item (c) below, bidder to provide list of items)</i>	Max. 12	
a.			
b.	List of 15 relevant tools and equipment for Mechanical BS		15
c.	installation works		
	1 crane – 15 marks for owned,12 marks for leased.		15
	3No. Minimum means of transport (1 pickup and 2 others owned or leased.		6

3.	WORK METHODOLOGY		Max. 10
a.			
b.	Signed work programme (Gantt chart) showing critical activities and the total duration of completing the project.		5
	Detailed method statement on how to carry out the intended works as detailed in the scope.		5
4.	WORK SAFETY MANAGEMENT		Max. 15
a.	Comprehensive documentation on the Job Safety Analysis detailing all potential hazards and mitigation related to this job.		10
b.	Signed Contractor's HSE policy.		5
5.	RELEVANT EXPERIENCE		Max. 25
	At least five (5) projects in the installation of, Air-conditioning and Mechanical ventilation on systems in the last five (5) years with five (5) different clients of a minimum value of Ksh. 5 million each The bidder must provide proof of project completion in form of completion certificates OR LPOs with corresponding recommendation letters OR contracts with corresponding recommendation letters showing works were carried out to successful and satisfactory completion. Each relevant completed project is awarded 5 marks. <i>(The 5 years Threshold is from 20 to date)</i>		
	TOTAL SCORE		100
	COMPLIANCE WITH THE TECHNICAL SCHEDULE		
	There is technical schedule of items to be supplied under this tender. The tenderer is expected to decipher the items in the technical schedule and comply to the requirements as follows: <ol style="list-style-type: none"> 1. Fill in the Technical Schedule as attached 2. Provide legible and clear supporting catalogues/brochures for all items listed in the technical schedule 3. Highlight the specific items intended for supply in the technical catalogues <p>NOTE Failure to execute instructions 1, 2 and 3 above shall constitute a non-conformity and the tender will be declared non responsive and therefore not qualified for further evaluation.</p>		
	CONFORMITY TO THE TECHNICAL SCHEDULE		R/NR

STAGE 3 - FINANCIAL EVALUATION

Upon completion of the technical evaluation a detailed financial evaluation for the bidder shall follow. (The financial evaluation shall proceed in the manner described in the Public Procurement and Disposal Act 2015(Revised Edition 2022) of the laws of Kenya and Public Procurement and Disposal Regulations 2022

The evaluation shall be in three stages

- a. Arithmetic error check
- b. Comparison of Rates for the bidder
- c. Consistency of the Rates for the bidder

a) CORRECTION, REVISION, ADJUSTMENT AND AMENDMENT OF TENDER

Tender sum will be corrected by the Procuring Entity as follows to Clause 82(i) of PPADA 2015 (Revised Edition 2022) and Clause 31(a) of Standard Tender Document for Procurement for Procurement of Small Works.

- i. In the event of a discrepancy between the tender amount as stated in the form of Tender and the corrected tender figure in the Main summary of the Bills of Quantities, the amount as stated in the Form of tender shall prevail.
- ii. Pursuant to section 82 the Public Procurement and Asset Disposal Act 2015(Revised Edition 2022), the tender sum as submitted and read out during tender opening shall be absolute and final and shall not be subject correction, adjustment or amendment in any way by any person or entity.
- iii. The Tenders with arithmetic errors shall be disqualified as per Clauses 33.2(b) of the Standard Tender Document. Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive.”

b) COMPARISON OF RATES FOR THE BIDDER

The evaluation committee will compare the rates with major components of the works and make note

c) CONSISTENCY OF THE RATES

The evaluation committee will compare the consistency of rates for similar items and note all inconsistencies of the rates of similar items.

STAGE 4 - DUE DILIGENCE

Particulars of post – qualification if applicable.

The Evaluation Committee shall inspect the premises and conduct due diligence to seek further clarification/confirmation, if necessary, to confirm authenticity/compliance of any condition of the tender/qualifications of the tenderer in line with Section 83 (1) of the Public Procurement and Asset Disposal Act,2015(Revised Edition 2022)

STAGE 5: RECOMMENDATION FOR AWARD

Award Criteria: The firm achieving the lowest evaluated price will be awarded the contract in line with Section 86(1) of the Public Procurement and Disposal Act,2015(Revised Edition 2022) subject to the due diligence clarifications a confirmation.

SECTION IV - TENDERING FORMS

QUALIFICATION FORMS

1. FOREIGN TENDERERS 40%RULE

Pursuant to ITT 3.9, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition.

ITEM	Description of Work Item	Describe location of Source	COST in KSHS	Comments, if any
A	Local Labor			
1				
2				
3				
4				
5				
B	Sub contracts from Local sources			
1				
2				
3				
4				
5				
C	Local materials			
1				
2				
3				
4				
5				
D	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
E	Add any other items			
1				
2				
3				
4				
5				
6				
	TOTAL COST LOCAL CONTENT		XXXXX	
	PERCENTAGE OF CONTRACT PRICE			

2. FORMEQU: EQUIPMENT

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Tenderer.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

3. FORM PER -1

Contractor's Representative and Key Personnel Schedule

Tenderers should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Contractor' Representative and Key Personnel

1.	Title of position: Contractor's Representative	
	Name of candidate:	
	Duration of appointment:	
	Time commitment: for this position:	
	Expected time schedule for this position:	
2.	Title of position:	
	Name of candidate:	
	Duration of appointment:	
	Time commitment: for this position:	
	Expected time schedule for this position:	
3.	Title of position:	
	Name of candidate:	
	Duration of appointment:	
	Time commitment: for this position:	
	Expected time schedule for this position:	
4.	Title of position:	
	Name of candidate:	
	Duration of appointment:	
	Time commitment: for this position:	
	Expected time schedule for this position:	
5.	Title of position:	
	Name of candidate	
	Duration of appointment:	
	Time commitment: for this position:	
	Expected time schedule for this position:	

4. FORM PER - 2:

Resume and Declaration - Contractor's Representative and Key Personnel.

Name of Tenderer

Position [#1]: <i>[title of position from Form PER-1]</i>	
Personnel information	Name: Date of birth:
	Address: E-mail:
	Professional qualifications:
	Academic qualifications:
	Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>
Details	Address of Procuring Entity:
	Telephone: Contact (manager / personnel officer):
	Fax:
	Job title: Years with present Procuring Entity:

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

Declaration

I, the undersigned [*insert either "Contractor's Representative" or "Key Personnel" as applicable*], certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Tender:

Commitment	Details
Commitment to duration of contract:	
Time commitment:	

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Tender evaluation;
- (b) result in my disqualification from participating in the Tender;
- (c) result in my dismissal from the contract.

Name of Contractor's Representative or Key Personnel: [*insert name*]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

5. TENDERERS QUALIFICATION WITHOUT PREQUALIFICATION

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria the Tenderer shall provide the information requested in the corresponding Information Sheets included hereunder.

5.1 FORM ELI -1.1

Tenderer

InformationForm

Date: _____

ITT No. and title: _____

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: <ul style="list-style-type: none"> • Legal and financial autonomy • Operation under commercial law <ol style="list-style-type: none"> 1. Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart and a list of Board of Directors

Tenderer's JV Information Form
(to be completed for each member of Tenderer's JV)

Date: _____

ITT No. and title: _____

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
<p>1. Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6.</p> <p><input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.5.</p> <p>2. Included are the organizational chart and a list of Board of Directors.</p>

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____
 Date: _____
 JV Member's Name _____
 ITT No. and title: _____

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria

- Contract non-performance did not occur since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.
- Contract(s) not performed since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1
- Contract(s) withdrawn since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1

Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria

- No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.
- Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
		Contract Identification: Name of Procuring Entity: Address of Procuring Entity: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4.			
<input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Entity" or "Contractor"]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

Include details relating to potential bid-rigging practices such as previous occasions where tenders were withdrawn, joint bids with competitors, subcontracting work to unsuccessful tenderers, etc.

5.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

5.4.1. Financial Data

Type of Financial information in _____ (currency)	Historic information for previous _____ years, (amount in currency, currency, exchange rate*, KSH equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*Refer to ITT 15 for the exchange rate

5.4.2 Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (Kenya Shilling equivalent)
1		
2		
3		

5.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for _____ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
- (b) be independently audited or certified in accordance with local legislation.
- (c) be complete, including all notes to the financial statements.
- (d) correspond to accounting periods already completed and audited.

Attached are copies of financial statements¹ for the _____ years required above; and complying with the requirements

¹ If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

5.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Annual turnover data (construction only)			
Year	Amount Currency	Exchange rate	Kenya Shilling equivalent
<i>[indicate year]</i>			
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

5.6 FORM FIN – 3.3:

Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria

Financial Resources		
No.	Source of financing	Amount (Kenya Shilling equivalent)
1		
2		
3		

5.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

Tenderers and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Procuring Entity's Contact Address, Tel,	Value of Outstanding Work [Current Kenya Shilling /month Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month]
1					
2					
3					
4					
5					

5.8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Page _____ of _____ pages

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	

5.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Kenya Shilling			
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				

5.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Kenya Shilling			
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				

5.9 FORM EXP - 4.2 (a) (cont.)

Specific Construction and Contract Management Experience (cont.)

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

5.10 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

Sub-contractor's Name² (as per ITT 34): _____

ITT No. and title: _____

All Sub-contractors for key activities must complete the information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: _

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount				Kenya Shilling
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

² If applicable

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

OTHER FORMS

6. FORM OF TENDER

(Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS

- i) *All italicized text is to help the Tenderer in preparing this form.*
- ii) *The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.*
- iii) *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (xxii) below.*

Date of this Tender submission:.....*[insert date (as day, month and year) of Tender submission]* **Tender Name and Identification:**.....*[insert identification]* **Alternative No.:**.....*[insert identification No if this is a Tender for an alternative]*

To: *[Insert complete name of Procuring Entity]*

Date of this Tender submission: *[insert date (as day, month and year) of Tender submission]*

Request for Tender No.: *[insert identification]* **Name and description of Tender** *[Insert as per ITT]* **Alternative No.:** *[insert identification No if this is a Tender for an alternative]*

To: *[insert complete name of Procuring Entity]*

Dear Sirs,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above-named Works, we, the undersigned offer to construct and complete the Works and remedy any defects therein for the sum³ of Kenya Shillings *[Amount in figures]* _____ Kenya Shillings *[amount in words]* _____

The above amount includes foreign currency⁴ amount (s) of *[state figure or a percentage and currency]* *[figures]* _____ *[words]* _____

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Architect notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
3. We agree to adhere by this tender until _____ *[Insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.

³ *This sum should be carried forward from the Summary of the Bills of Quantities.*

⁴ *The percentage quoted above should not include provisional sums, and not more than two foreign currencies are allowed.*

4. We understand that you are not bound to accept the lowest or any tender you may receive.
5. We, the under signed, further declare that:
 - i) No reservations: We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
 - ii) Eligibility: We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
 - iii) Tender - Securing Declaration: We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
 - iv) Conformity: We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works]*;
 - v) Tender Price: The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
 - vi) Option 1, in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies]*; or
Option 2, in case of multiple lots:
 - (a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]*; and
 - (b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]*;
 - vii) Discounts: The discounts offered and the methodology for their application are:
 - viii) The discounts offered are: *[Specify in detail each discount offered.]*
 - ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;
 - x) Tender Validity Period: Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
 - xi) Performance Security: If our Tender is accepted, we commit to obtain Performance Security in accordance with the Tendering document;
 - xii) One Tender Per Tender: We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a sub-contractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
 - xiii) Suspension and Debarment: We, along with any of our subcontractors, suppliers, Engineer, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.

- xiv) State-owned enterprise or institution: *[select the appropriate option and delete the other] [We are not a state- owned enterprise or institution]/[We are a state-owned enterprise or institution but meet the requirements of ITT3.8];*
- xv) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate “none.”)

- xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;
- xviii) Fraud and Corruption: We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption; and
- xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the “Certificate of Independent Tender Determination” attached below.
- xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from____(*specify website*) during the procurement process and the execution of any resulting contract.
- xxi) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.
- xxii) We, the Tenderer, have duly completed, signed and stamped the following Forms as part of our Tender:
- a) Tenderer's Eligibility; Confidential Business Questionnaire - to establish we are not in any conflict to interest.
 - (b) Certificate of Independent Tender Determination - to declare that we completed the tender without colluding with other tenderers.
 - (a) Self-Declaration of the Tenderer - to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
 - (d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.

Further, we confirm that we have read and understood the full content and scope of

fraud and corruption as informed in “Appendix 1 - Fraud and Corruption” attached to the Form of Tender.

Name of the Tenderer: **[insert complete name of person signing the Tender]*

Name of the person duly authorized to sign the Tender on behalf of the Tenderer:
***[insert complete name of person duly authorized to sign the Tender]*

Title of the person signing the Tender: *[insert complete title of the person signing the Tender]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

Date signed _____ day of _____, _____

Notes

** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer.*

***Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

(a) TENDERER'S ELIGIBILITY-CONFIDENTIAL BUSINESS QUESTIONNAIRE

Instruction to Tenderer

Tender is instructed to complete the particulars required in this Form, *one form for each entity if Tender is a JV*. Tenderer is further reminded that it is an offence to give false information on this Form.

(a) Tenderer's details

	ITEM	DESCRIPTION
1	Name of the Procuring Entity	
2	Reference Number of the Tender	
3	Date and Time of Tender Opening	
4	Name of the Tenderer	
5	Full Address and Contact Details of the Tenderer.	1. Country 2. City 3. Location 4. Building 5. Floor 6. Postal Address 7. Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	
7	Name, country and full address (<i>postal and physical addresses, email, and telephone number</i>) of Registering Body/Agency	
8	Description of Nature of Business	
9	Maximum value of business which the Tenderer handles.	
10	State if Tenders Company is listed in stock exchange, give name and full address (<i>postal and physical addresses, email, and telephone number</i>) of state which stock exchange	

General and Specific Details

(b) Sole Proprietor, provide the following details.

Name in full _____ Age _____
Nationality _____ Country of Origin _____
Citizenship _____

(c) **Partnership**, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

(d) **Registered Company**, provide the following details.

i) Private or public Company _____

ii) State the nominal and issued capital of the Company _____

Nominal Kenya Shillings (Equivalent).....

Issued Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

(e) **DISCLOSURE OF INTEREST** - Interest of the Firm in the Procuring Entity.

i) Are there any person/persons in..... (*Name of Procuring Entity*) who has/have an interest or relationship in this firm? Yes/No.....If yes, provide details as follows.

	Names of Person	Designation in the Procuring Entity	Interest or Relationship with Tenderer
1			
2			
3			

(i) **Conflict of interest disclosure**

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	decisions of the Procuring Entity regarding this tendering process.		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the such Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.		

Certification

On behalf of the Tenderer, I certify that the information given above is complete, current and accurate as at the date of submission.

Full Name _____

Title or Designation _____

(Signature)

(Date)

b) CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the _____
_____ [Name of Procuring
Entity] for: _____ [Name and number of tenders]
in response to the request for tenders made by: _____ [Name of Tenderer] do
hereby make the following statements that I certify to be true and complete in every respect:
I certify, on behalf of _____ [Name of Tenderer] that:

1. I have read and I understand the contents of this Certificate;
2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;
4. For the purposes of this Certificate and the Tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
 - a) Has been requested to submit a Tender in response to this request for tenders;
 - b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;
5. The Tenderer discloses that [check one of the following, as applicable]:
 - a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
 - b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;
6. In particular, without limiting the generality of paragraphs (5)(a) or(5)(b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) methods, factors or formulas used to calculate prices;
 - c) the intention or decision to submit, or not to submit, a tender; or
 - d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5)(b) above;
7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph(5)(b) above;
8. The terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5)(b) above.

Name _____

Title _____

Date _____

[Name, title and signature of authorized agent of Tenderer and Date]

(c) SELF- DECLARATION FORMS

FORM SD1

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

I, of Post Office 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/Senior 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 here in above is true to the best of my knowledge, information and belief.

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

Bidder Official Stamp

FORM SD2

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/Senior 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 theafore said Bidder, its servants and/oragents/subcontractorswillnotengageinanycorruptorfraudulent 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 here in above is true to the best of my knowledge information and belief.

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

Bidder's Official Stamp

DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

I (person) on behalf of (*Name of the Business/ Company/Firm*)
.....

..... declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

I do here by commit to abide by the provisions of the Code of Ethics for persons participating in Public Procurement and Asset Disposal.

Name of Authorized signatory.....

Sign.....

Position.....

Office address.....

Telephone..... E-mail.....

.....

Name of the Firm/Company.....

Date.....

(Company Seal/ Rubber Stamp where applicable)

Witness

Name.....

.....

Sign.....

Date.....

(d) APPENDIX 1 - FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

1.1 The Government of Kenya's Anti-Corruption and Economic Crime laws and their sanction's policies and procedures, Public Procurement and Asset Disposal Act (*no. 33 of 2015*) and its Regulation, and any other Kenya's Acts or Regulations related to Fraud and Corruption, and similar offences, shall apply with respect to Public Procurement Processes and Contracts that are governed by the laws of Kenya.

2. Requirements

2.1 The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.

2.2 Kenya's public procurement and asset disposal act (*no. 33 of 2015*) under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior:

- 1) A person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
- 2) A person referred to under subsection (1) who contravenes the provisions of that subsection commits an offence;
- 3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
 - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
 - b) if a contract has already been entered into with the person, the contract shall be voidable;
- 4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
- 5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
 - a) Shall not take part in the procurement proceedings;
 - b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
 - c) shall not be a subcontractor or for the tender to whom was awarded contract, or a member of the group of tenderers to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.

- 6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
 - 7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.
3. In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:
- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
 - i) "Corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii) "Fraudulent practice" is any act or omission, including is representation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - iv) "Obstructive practice" is:
 - Deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
 - b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

"Fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal processor the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers 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.
 - c) Rejects a proposal for award¹ of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

- d) Pursuant to the Kenya's above stated Acts and Regulations, may recommend to appropriate authority(ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
- e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring(i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect² all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and
- f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

¹For the avoidance of doubt, a party's in eligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

² Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Investigating Authority or persons appointed by the Procuring Entity to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

FORM OF TENDER SECURITY-[Option 1-Demand Bank Guarantee]

Beneficiary: _____

Request for Tenders No:

Date: _____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (here in after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here in after called " the Tender") for the execution of _____ under Request for Tenders No. ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of ____ (____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
 - (a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
 - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

1. Whereas [*Name of the tenderer*] (hereinafter called “the tenderer”) has submitted its tender dated [*Date of submission of tender*] for the [*Name and/or description of the tender*] (hereinafter called “the Tender”) for the execution of _____ under Request for Tenders No. _____ (“the ITT”).
2. KNOW ALL PEOPLE by these presents that WE of [**Name of Insurance Company**] having our registered office at (hereinafter called “the Guarantor”), are bound unto [*Name of Procuring Entity*] (hereinafter called “the Procuring Entity”) in the sum of (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with the Common Seal of the said Guarantor this ___ day of _____ 20 __.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:
 - a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Principal; or
 - b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) failed to execute the Contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to tenderers (“ITT”) of the Procuring Entity's Tendering document.

then the guarantee undertakes to immediately pay to the Procuring Entity up to the above amount upon receipt of the Procuring Entity's first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) twenty-eight days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[Date]

[Signature of the Guarantor]

[Witness]

[Seal]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

FORM OF TENDER - SECURING DECLARATION

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

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

Tender No.: *[insert number of tendering process]*

To: *[insert complete name of Purchaser]* I/We, the

undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
2. I/We accept that I/we will automatically be suspended from being eligible for tendering 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 tender during the period of tender validity specified by us in the Tendering 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 tenders.
3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
 - a) Our receipt of a copy of your notification of the name of the successful Tenderer; or
 - b) thirty days after the expiration of our Tender.
4. I/We understand that if I am /we are/ in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and 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:..... Capacity/title (director or partner or sole proprietor, etc.)

Name:..... Duly authorized to sign the bid for and on behalf of: *[insert complete name of Tenderer]*

Dated on day of, *[Insert date of signing]* Seal or stamp

Appendix to Tender

Schedule of Currency requirements

Summary of currencies of the Tender for _____ *[insert name of Section of the Works]*

<i>Name of currency</i>	<i>Amounts payable</i>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency	<i>[To be entered by the Procuring Entity]</i>

PART II- WORKS REQUIREMENTS

SECTION V - BILLS OF QUANTITIES

A. Notes and Sample Items for Preparing a Bill of Quantities

1. These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Tender Documents. Priced Bills of Quantities shall be part and parcel of the Contract Documents.
2. The objectives and purpose of the Bills of Quantities are to provide sufficient information on the specifications, descriptions and quantities of Works to be performed to enable tenders to be prepared efficiently and accurately and when a contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed. In order to attain these objectives, Works should be itemized in the Bill of Quantities insufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and clear as possible.
3. The Bills of Quantities should be divided generally into the following sections:
 - a) Preambles
 - b) Preliminary items
 - c) Work Items
 - c) Daywork Schedule; and
 - d) Provisional items
 - e) Summary.

4. NOTES TO PREPARING PREAMBLES

- 4.1 The Preambles should include only those items that constitute the cost of the works but would not be priced separately as they are expected to be included in the unit prices. Care should be taken to ensure that these items are not are petition of the conditions of contract. The Preambles should indicate the inclusiveness of the unit prices and should state the methods of measurement that have been adopted in the preparation of the Bill of Quantities, that are to be used for the measurement of any part of the Works. The units of measurement and abbreviations should be defined and any mandatory national units defined and described. The methods of and procedure for re- measurement should be described in the Preambles.
- 4.2 Units of Measurement - The following units of measurement and abbreviations shall be used, unless other national units are mandatory in Kenya.

Unit	Abbreviation	Unit	Abbreviation
cubic meter	m ³ or cu m	millimetre	mm
hectare	ha	month	mon
hour	h	number	nr
kilogram	kg	square meter	m ² or sq m
lump sum	ls	square millimeter	mm ² or sq mm
meter	m	week	wk
metric ton	t		

- 4.3 The Bills of Quantities shall be read in conjunction with the Instructions to Tenders, General and Special Conditions of Contract, Technical Specifications, and Drawings.

44. The quantities given in the Bills of Quantities are estimated and partly provisional and are given to provide a common basis for tendering. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Architect and valued at the rates and prices tender in the priced

Bills of Quantities, where applicable, and otherwise at such rates and prices as the Architect may fix within the terms of the Contract.

45. The rates and prices tender in the priced Bills of Quantities shall, except in so far as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
46. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
47. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bills of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
48. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bills of Quantities. References to the relevant sections of the Contract documents shall be made before entering prices against each item in the priced Bills of Quantities.
49. Provisional Sums and contingency sums included and so designated in the Bills of Quantities shall be expended in whole or in part at the direction and discretion of the Architect in accordance with Sub-Clause 13.5 and Clause 13.6 of the General Conditions of contract.
410. In preparing the Bills of Quantities, notes should be removed as they are intended to guide the person preparing the Tender Documents. The Contractor must allow in his rates for any costs associated with and complying with the requirements in the Preambles.
411. Should a tenderer/contractor not price any item in any section of the Bills of Quantities including Preliminary items, it will be assumed that he/she has spread its cost in other areas that he/she will have priced. Therefore, the item or items will be executed without any additional costs or without being treated like variations.

5. NOTES ON PREPARING BILLS OF QUANTITIES

- 5.1. The Preliminary Items should be limited to tangible items that should be priced by the tenderer, are identifiable and can be priced separately and included in the interim valuations precisely. Such items may include such items as site office, notice boards, and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.
- 5.2. The work items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. Such groups could be ground excavations, structures, external works, services, etc. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.
- 5.3. Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste. Quantities

- should be rounded up where appropriate.
- 5.4 Where the measured items are redeemed not to be exact because of the likelihood that the scope can change during the execution of the works, such items could be subject to re-measurement, the word “**provisional**” should be used to identify such cases. Where whole sections of the work items fall in this class, for example foundations, they should be labelled “Provisional Quantities” or “Provisional Items” so that the Tenderer/Contractor is advised up front that such items are subject to re-measurement to be done before such work is covered-up.
- 5.5 All items that have not been measured and therefore not subject to tender pricing should be listed in the Bills of Quantities as **Provisional Sums** for particular item or class of Work, which may be subject to a nominated subcontract or separate measurements at a later date during the execution of the works. For example, if it is deemed not possible to measure electrical works before going to tender because detail designs are not ready, a provisional sum can be allowed in the Bills of Quantities for “Installation of Electrical Works” to be executed later when actual design details are completed. To the extent not covered above, there should be in the Bills of Quantities a general provision for physical and financial contingencies made as a “Contingencies” and “Provisional Sum for Fluctuations”. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises.
- 5.6 Provisional sums to cover specialized works normally carried out by Nominated Sub Contractors should be avoided and instead Bills of Quantities of the specialized Works should be included as a section of the main Bills of Quantities to be priced by the Main Contractor. The Main Contractor should be required to indicate the name(s) of the specialized firms he proposes to engage to carry out the specialized Works as his approved domestic sub-contractors. Only provisional sums to cover specialized Works by statutory authorities should be included in the Bills of Quantities.
- 5.7 A Daywork Schedule should be included if the probability of unforeseen work, outside the items included in the Bill of Quantities, is relatively high. To facilitate checking by the Procuring Entity of the realism of rates quoted by the tenderers, the Daywork Schedule should normally comprise:
- i) A list of the various classes of labor, and materials for which basic.
 - ii) Daywork rates and prices for various categories of labor are to be inserted by the tenderer, together with a statement of the conditions under which the Contractor will be paid for Work executed on a Daywork basis.
 - iii) A percent to be entered by the tenderer against each basic Day work item.
 - iv) Subtotal amount for labor, materials and plant representing the Contractor's profit, overheads, supervision and other charges.
- 5.8 The Summary should contain a tabulation of the separate parts of the Bills of Quantities carried forward, with provisional sums for Daywork, Provisional sums and Contingencies, and provision for Total Costing. The last line should allow for tenderer to indicate any discounts before arriving at a total cost carried forward to the Form of Tender.

BILLS OF QUANTITIES

(a) Preambles

1. The method of measurement of completed work for payment shall be in accordance with *[insert the name of a standard reference guide, or full details of the methods to be used]*.
2. The Site is situated in Mutom Township, Gatundu South along Kenyatta Road It is approximately 14 Kilometers from Thika Super Highway.

Which is an existing public road. Any damage caused to the surfaces of this road shall be made good at the Contractor's expense. The Contractor shall visit the site and acquaint itself with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.

3. The Contractor shall obtain the Architect's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Architect approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. Two sets of the Working Drawings shall be provided to the contractor but additional copies shall be provided at a cost to be determined by the Engineer.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Architect May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub- Contractor involve.
8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim for extension of time due to the normal inclement weather for this area shall be entertained.
9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to be carried out, with the appropriate dates thereof. This Chart shall be agreed with the Architect and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.
10. The Contractor shall submit to the Architect on the first day of each week or such longer period as the Architect from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative

progression all important items of each section or portion of the Works.

11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent areas as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Architect shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Architect within two weeks of exposure.
12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.
13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, waterpipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Architect and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging, if necessary, to locate precisely the position and details of the services which are likely to affect his operations.
14. The Contractor shall include in his prices for the transport of materials, workmen, etc./, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.
15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.
16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.
17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.
18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.
19. 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 time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractor directions and instruction

from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.

20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects. The site shall be kept tidy and clear of dangerous rubbish. The Architect shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.
21. The are as available to the Contractor for work yards, offices and other facilities shall be directed by the Architect and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source then a town cost.
22. The Contractor shall give the Architect reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Architect shall not relieve the Contractor of his duties or responsibilities under the Contract.
23. The Contractor must take steps necessary to safe guard and shall beheld fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused there on, and he shall indemnify the Procuring Entity against any loss or claim that may arise.
2. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
3. The Contractors attention is drawn to the standards levy order which was amended on 15th October 1998. Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from January 1999. Tenderer shall allow for this in the build-upon f his rates.
4. The Contractor shall provide temporary sheds, offices mesh rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
5. Contractor shall provide/build labor camp sat areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
6. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
7. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
8. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall

remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.

9. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
10. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
11. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion of the Contract.
12. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all paint and cement all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.
13. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
14. The Contractor shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the Architect for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples, when approved, shall be the minimum standard for the work to which they apply. The procedure for submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.
15. The Contractor's attention is drawn to the Finance Act of the year 2013/2014 on withholding tax on contractual payment section 5 which became effective on 1st September 2013. A 3% withholding tax will be applicable to all interim payments exceeding Kshs..... for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting there from in the build-up of rates.
16. Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.
17. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6th June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.

18. The Contractor attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT1.19 as instructed elsewhere.
19. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.
20. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
21. The Contractors attention is drawn to the standards levy order which was amended on 15th October 1998. Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from January 1999. Tenderer shall allow for this in the build-up of his rates.
22. The Contractor shall provide temporary sheds, offices meshrooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
23. Contractor shall provide/build labor camp sat areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
24. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
25. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
26. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.
27. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
28. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
29. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion of the Contract.
30. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall

leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all paint and cement and all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection therewith.

31. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
32. The Contractor shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the Architect for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples, when approved, shall be the minimum standard for the work to which they apply. The procedure for submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.
33. The Contractor's attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractual payment section 35(7)(i)(ii) which became effective on 1st July 2000. A 3% withholding tax will be applicable to all interim payments exceeding Kshs..... for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting therefrom in the build-up of rates.
34. Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.
35. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6th June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.
36. The Contractor's attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT 1.19 as instructed elsewhere.
37. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

BILL NO. 1 - PRELIMINARY ITEMS

ITEM No.	DESCRIPTION	AMOUNT
1.	<p>The Contractor shall provide, or erect and maintain an approved lock-up office for the sole use of the Architect and his own site staff. The office, which will have a total floor area of not less than 1136 square metres, will be divided into two separate interconnected offices. Services to be provided shall include a telephone, water sanitary and electrical supply and drainage. The offices shall be supplied with furniture and equipment that shall include:</p> <p>4 No. desks with chairs; 1 No. large table with sufficient number of chairs; drawing table along the full length of one side with plan drawers and drawing stools: 4 No. waste paper baskets: sufficient number of pin boards: and any additional furniture and fittings as may reasonably be required during the Contract period. The Contractor shall provide the Architect and site staff with computer sets or laptops, printers and telephones all that are necessary for project use.</p> <p>The office furniture and equipment shall all be to the approval of the Engineer. The Contractor shall also provide all labor, equipment and consumable stores equipment throughout the currency of the contract.</p>	
2	<p>[OPTIONAL] Contractor shall provide a house for Engineers site agent, which shall be one bedroomed temporary house with a sitting room, toilet, bathroom and a kitchen complete with electrical and sanitary installations and provide maintenance and paying of bills of water and electricity up to and including end of the contract period.</p>	
3	<p>Provide a signboard not less than 4 square meters in size of a design type, and with lettering and coloring and in a position approved by the Engineer. The signboard shall be for the display of the Main Contractor's name and the names of all his Sub-Contractors, with the Procuring Entity's name painted thereon. All Consultants names be printed in letters not exceeding 50 mm high. No other signboard or advertising shall be allowed. The signboard shall be fully maintained during the Contract Period and shall be pulled down and removed at the end of the contract.</p>	
4	Add others (if any)	
5		
6		
TOTAL CARRIED TO GRAND SUMMARY		

BILL NO. 2: WORK ITEMS

(organized appropriately into work sections, such as foundations, walls/structure, finishes, doors and windows, mechanical installations. etc.

Bill No 2 - *(Name of Section e.g. Foundations).*

<i>Item no.</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Amount</i>
Total for Bill No. 2 (carried forward to Summary, p. __)					_____

Bill No. 3: Schedule of Daywork Rates - Labor

Item no.	Description	Unit	Nominal quantity	Rate	Amount
	Subtotal				
	Allow ___ percent ^a of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above.				
	Total for Daywork (carried forward to Daywork Summary, p. _____)				

a. To be entered by the Tenderer.

Bill No. 4: Schedule of Daywork Rates - Materials

Item no.	Description	Unit	Nominal quantity	Rate	Extended amount
Subtotal					
Allow ___ percent a. of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 4 (b) above.					
Total for Daywork: Materials (carried forward to Daywork Summary, p. _____)					

a. To be entered by the Tenderer.

Bill No. 5: Schedule of Daywork Rates - Contractor's Equipment

<i>Item no.</i>	<i>Description</i>	<i>Nominal quantity (hours)</i>	<i>Basic hourly rental rate</i>	<i>Extended amount</i>
	Allow . percent ^a of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 5 above.			
Total for Daywork: Contractor's Equipment (carried forward to Daywork Summary, p. _)				

a. To be entered by the Tenderer.

Bill No. 6: Daywork Summary

	<i>Amount^a</i>	<i>% Foreign</i>	<i>Currency</i>
1. Total for Daywork: Labor			
2. Total for Daywork: Materials			
3. Total for Daywork: Contractor's Equipment			
Total for Daywork (Provisional Sum) (carried forward to Summary of Bills of Quantities, p. ___)			

Bill No. 7: Provisional Sums

<i>Bill no.</i>	<i>Item no.</i>	<i>Description</i>	<i>Amount</i>
1			
2			
3			
4			
etc.			
Total for Specified Provisional Sums (carried forward to Grand Summary)			

GRAND SUMMARY

SUMMARY ITEMS	<i>Page</i>	<i>Amount</i>
Bill No. 1: Preliminary Items		
Bill No. 2: Work Items		
Bill No 3: Daywork Summary		
Bill No 4: Provisional Sums		
Subtotal of Bills No 1-4		
Allow for any Discounts ⁱ		
TOTAL TENDER PRICE Carried forward to Form of Tender		

(i) If a percentage used, it should be indicated on which Bill No. items but on Bill No.4 – Provisional Sums.

SECTION VI - SPECIFICATIONS

Notes for preparing Specifications

1. Specifications must be drafted to present a clear and precise statement of the required standards of materials, and workmanship for tenderers to respond realistically and competitively to the requirements of the Procuring Entity and ensure responsiveness of tenders. The Specifications should require that all materials, plant, and other supplies to be permanently incorporated in the Works be new, unused, of the most recent or current models, and incorporating all recent improvements in design and materials unless provided otherwise in the Contract. Where the Contractor is responsible for the design of any part of the permanent Works, the extent of his obligations must be stated.
2. Specifications from previous similar projects are useful and may not be necessary to re-write specifications for every Works Contract.
3. There are considerable advantages in standardizing **General Specifications** for repetitive Works in recognized public sectors, such as high ways, urban housing, irrigation and water supply. The General Specifications should cover all classes of workmanship, materials and equipment commonly involved in constructions, although not necessarily to be used in a particular works contract. Deletions or addenda should then adapt the General Specifications to the particular Works.
4. Care must be taken in drafting Specifications to ensure they are not restrictive. In the Specifications of standards for materials, plant and workmanship, existing Kenya Standards should be used as much as possible, otherwise recognized international standards may also be used.
5. The Procuring Entity should decide whether technical solutions to specified parts of the Works are to be permitted. Alternatives are appropriate in cases where obvious (and potentially less costly) alternatives are possible to the technical solutions indicated in tender documents for certain elements of the Works, taking into consideration the comparative specialized advantage of potential tenderers.
6. The Procuring Entity should provide a description of the selected parts of the Works with appropriate reference to Drawings, Specifications, Bills of Quantities, and Design or Performance criteria, stating that the alternative solutions shall be at least structurally and functionally equivalent to the basic design parameters and Specifications.
7. Such alternative solutions shall be accompanied by all information necessary for a complete evaluation by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, and other relevant details. Technical alternatives permitted in this manner shall be considered by the Procuring Entity each on its own merits and independently of whether the tenderer has priced the item as described in the Procuring Entity's design included with the tender documents.

SECTION VII - DRAWINGS

Attached

PART III - THE CONDITIONS OF CONTRACT AND CONTRACT

SECTION VIII - GENERAL CONDITIONS OF CONTRACT (GCC)

[Name of Procuring Entity]

[Name of Contract]

[Architect Name and Address]

General Conditions of Contract

1. GENERAL PROVISIONS

1.1 Definitions

In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated below. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

“Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

“Base Date” means a date 30 day prior to the submission of tenders.

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

tender. **“Completion Date”** means the date of completion of the Works as certified by the Engineer.

“Contract Price” means the price defined in the contract and thereafter as adjusted in accordance with the provisions of the Contract.

“Contract” means the agreement entered into between the Procuring Entity 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.

“Contractor's Documents” means the calculations, computer programs and other software, progress reports, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

“Contractor's Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Procuring Entity's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

“Contractor's Personnel” means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labor and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

“Contractor's Representative” means the person named by the Contractor in the Contractor appointed from time to time by the Contractor who acts on behalf of the Contractor.

“Contractor” means the person(s) named as contractor in the Form of Tender accepted by the Procuring Entity.

“Cost” means expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

“Day” means a calendar day and **“year”** means 365 days.

“Dayworks” means Work inputs subject to payment on a time basis for labour and the associated materials and plant

“Defect” means any part of the Works not completed in accordance with the Contract.

“Defects Liability Certificate” means the certificate issued by Architect upon correction of defects by the Contractor.

“Defects Liability Period” means the period named in the Special Conditions of Contract and calculated from the Completion Date, within which the contractor is liable for any defects that may develop in the handed over works.

“Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over the days stated in the Special Conditions of Contract.

“Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract.

“Final Payment Certificate” means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

“Final Statement” means the statement defined in Sub-Clause 14.11

[Application for Final Payment Certificate]. **“Force Majeure”** is defined in Clause 19 [Force Majeure].

“Foreign Currency” means a currency of another country (not Kenya) in which part (or all) of the Contract Price is payable, but not the Local Currency.

“Goods” means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

“Interim Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.

“Laws” means all national legislation, statutes, ordinances, and regulations and by-laws of any legally constituted public authority.

“Letter of Acceptance” means the letter of formal acceptance of a tender, signed by Procuring Entity, including any annexed memoranda comprising agreements between and signed by both Parties.

“Local Currency” means the currency of Kenya.

“Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

“Notice of Dissatisfaction” means the notice given by either Party to the other under Sub-Clause 20.3 indicating its dissatisfaction and intention to commence arbitration.

“Special Conditions of Contract” means the pages completed by the Procuring Entity entitled Special Conditions of Contract which constitute Part A of the Special Conditions.

“Party” means the Procuring Entity or the Contractor, as the context requires.

“Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment]. **“Performance Certificate”** means the certificate issued under Sub-Clause 11.9 [Performance Certificate]. **“Performance Security”** means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security]. **“Permanent Works”** means the permanent works to be executed by the Contractor under the Contract.

“Plant” means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Procuring Entity and relating to the construction or operation of the Works.

“Procuring Entity's Equipment” means the apparatus, machinery and vehicles (if any) made available by the Procuring Entity for the use of the Contract or in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Procuring Entity.

“Procuring Entity's Personnel” means the Engineer, the Engineer, the assistants and all other staff, labor and other employees of the Architect and of the Procuring Entity; and any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as Procuring Entity's Personnel.

“Procuring Entity” means the Entity named in the Special Conditions of Contract.

“Engineer” is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Engineer) 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.

“Engineer” means the person appointed by the Procuring Entity to act as the Architect for the purposes of the Contract and named in the Special Conditions of Contract, or other person appointed from time to time by the Procuring Entity and notified to the Contractor

“Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums].

“Retention Money” means the accumulated retention moneys which the Procuring Entity retains under Sub-Clause 14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].

“Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Form of Tender, as included in the Contract.

“Section” means a part of the Works specified in the Special Conditions of Contract as a Section (if any)

“Site Investigation Reports” are those reports that may be included in the tendering documents which a ref actual and interpretative about the surface and sub-surface condition sat the Site.

“Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

“Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

“Start Date” or “Commencement 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).

“Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

“Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works.

“Taking-Over Certificate” means a certificate issued under Clause 10 [Procuring Entity's Taking Over].

“Temporary Works” means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

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

“Tender” means the Form of Tender and all other documents which the Contractor submitted with the Form of Tender, as included in the Contract.

“Tests after Completion” means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Tests on Completion” means the tests which are specified in the Contract agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Time for Completion” means the time for completing the Works or a Section (as the case may be) as stated in the Special Conditions of Contract (with any extension calculated from the Commencement Date.

“Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

“Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

“Works” means the items the Procuring Entity requires the Contractor to undertake as defined in the Appendix to Conditions of Contract. **“Works”** may also mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “written” or “in writing” means hand-written, type-written, printed or electronically

made, and resulting in a permanent record; and

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

1.3 Communications

- 1.3.1 Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:
- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Special Conditions of Contract; and
 - b) delivered, sent or transmitted to the address of or the recipient's communications as stated in the Special Conditions of Contract. However:
 - i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.
- 1.3.2 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Architect or the other Party, as the case may be.

1.4 Law and Language

1.4.1 The Contract shall be governed by the laws of **Kenya**.

1.4.2 The ruling language of the Contract shall be **English**.

1.5 Priority of Documents

- a) The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence: The Contract Agreement,
- b) The Letter of Acceptance,
- c) The Special Conditions – Part A,
- d) the Special Conditions – Part B
- e) the General Conditions of Contract
- f) the Form of Tender,
- g) the Specifications and Bills of Quantities
- h) the Drawings, and
- i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Architect shall issue any necessary clarification or instruction.

1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 14 days after the Contractor receives the Contract Agreement, unless the Special Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Special Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Procuring Entity.

1.7 Assignment

The Contractor shall not assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, the contractor:

- a) May as sign the whole or any part with the prior consent of the Procuring Entity, and
- b) may, as security in favor of a bank or financial institution, assign its right to moneys due, or to become due, under the Contract.

1.8 Care and Supply of Documents

- 1.8.1 The Specifications and Drawings shall be in the custody and care of the Procuring Entity. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawings and Bills of Quantities shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
- 1.8.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Procuring Entity. Unless otherwise stated in the Contract, the Contractor shall supply to the Architect two copies of each of the Contractor's Documents.
- 1.8.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Procuring Entity's Personnel shall have the right of access to all these documents at all reasonable times.
- 1.8.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Timely provision of Drawings or Instructions

- 1.9.1 The Contractor shall give notice to the Architect whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.
- 1.9.2 If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Architect to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
 - a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any other associated costs accrued, which shall be included in the Contract Price.
- 1.9.3 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 1.9.4 However, if and to the extent that the Architect failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, or costs accrued.

1.10 Procuring Entity's Use of Contractor's Documents

- 1.10.1 As agreed between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.
- 1.10.2 The Contractor shall be deemed (by signing the Contract) to give to the Procuring Entity a

non-terminable transferable non-exclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

- a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
- c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

1.103 The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Procuring Entity for purposes other than those permitted under Sub-Clause 1.10.2.

1.11 Contractor's Use of Procuring Entity's Documents

As agreed between the Parties, the Procuring Entity shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Procuring Entity. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Procuring Entity's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12 Confidential Details

1.12.1 The Contractor's and the Procuring Entity's Personnel shall ensure confidentiality at all times. The confidentiality shall survive termination or completion of the contract. They shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

1.12.2 The Contractor's and the Procuring Entity's Personnel shall also treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

1.13 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:

- a) The Procuring Entity shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specifications as having been (or to be) obtained by the Procuring Entity; and the Procuring Entity shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and

- b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licenses and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Procuring Entity harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

1.14 Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

- a) These persons shall be deemed to be jointly and severally liable to the Procuring Entity for the performance of the Contract;
- b) these persons shall notify the Procuring Entity of their leader who shall have authority to bind the Contractor and each of these persons; and
- c) the Contractor shall not alter its composition or legal status without the prior consent of the Procuring Entity.

1.15 Inspections and Audit by the Procuring Entity

Pursuant to paragraph 2.2(e). of Appendix B to the General Conditions, the Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Public Procurement Regulatory Authority, Procuring Entity and/or persons appointed or designated by the Government of Kenya to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Procuring Entity if requested by the Procuring Entity. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 15.6 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Procuring Entity's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Procuring Entity's prevailing sanctions procedures).

2 THE PROCURING ENTITY

2.1 Right of Access to the Site

2.1.1 The Procuring Entity shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the **Special Conditions of Contract**. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Procuring Entity is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Procuring Entity shall do so in the time and manner stated in the Specification. However, the Procuring Entity may withhold any such right or possession until the Performance Security has been received.

2.1.2 If no such time is stated in the Special Conditions of Contract, the Procuring Entity shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

2.1.3 If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Procuring Entity to give any such right or possession within such time, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and

b) payment of any such Cost-plus profit, which shall be included in the Contract Price.

2.14 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

2.15 However, if and to the extent that the Procuring Entity's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

2.2 Permits, Licenses or Approvals

2.21 The Procuring Entity shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:

- a) Copies of the Laws of Kenya which are relevant to the Contract but are not readily available, and
- b) any permits, licenses or approvals required by the Laws of Kenya:
 - i) which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],
 - ii) for the delivery of Goods, including clearance through customs, and
 - iii) for the export of Contractor's Equipment when it is removed from the Site.

2.3 Procuring Entity's Personnel

The Procuring Entity shall be responsible for ensuring that the Procuring Entity's Personnel and the Procuring Entity's other contractor son the Site:

- a) co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- b) take action ssimilar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) ofSub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

2.4 Procuring Entity's Financial Arrangements

The Procuring Entity shall make and maintain all necessary financial arrangements which will enable the Procuring Entity to pay the Contract Price punctually (as estimated at that time) in accordance with Clause14 [Contract Price and Payment].

3 THE ENGINEER

3.1 Architect Duties and Authority

3.1.1 The Procuring Entity shall appoint the Architect who shall carry out the duties as signed to him in the Contract. The Architect staff shall include suitably qualified Assistants and other professionals who are competent to carry out these duties. The Architect Name and Address shall be provided in the **Special Conditions of Contract**.

3.1.2 The Architect shall have no authority to amend the Contract.

3.1.3 The Architect May exercise the authority attributable to the Architect as specified in or necessarily to be implied from the Contract. If the Architectis required to obtain the approval of the Procuring Entity before exercising a specified authority, the requirements shall be as stated in the **Special Conditions of Contract**. The Procuring Entity shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

3.14 However, whenever the Architect exercises a specified authority for which the Procuring Entity's approval is required, then (for the purposes of the Contract) the contractor shall require the Architect to provide evidence of such approval before complying with the instruction.

3.15 Except as otherwise stated in these Conditions:

- a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Architect shall be deemed to act for the Procuring Entity;
- b) the Architect has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;
- c) any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Architect (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and
- d) any act by the Architect in response to a Contractor's request shall be notified in writing to the Contractor

3.16 The following provisions shall apply:

The Architect shall obtain the specific approval of the Procuring Entity before taking action under the following Sub-Clauses of these Conditions:

- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost.
- b) Sub-Clause 13.1: instructing a Variation, except;
 - i) In an emergency situation as determined by the Engineer, or
 - ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the **Special Conditions of Contract**.
- c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
- d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable three currencies.

3.17 Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Procuring Entity, with any such instruction of the Engineer. The Architect shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Procuring Entity.

3.2 Delegation by the Engineer

3.21 The Architect may from time to time assign duties and delegate authority to assistants and may also revoke such assignment or delegation. These assistants may include a resident Engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Architect shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

3.22 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction,

notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Architect to reject the work, Plant or Materials;
- b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

33.1 The Architect may issue to the Contractor (at anytime) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under Clause 3.2.1.

33.2 The Contractor shall comply with the instructions given by the Architect or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Architect or a delegated assistant:

- a) Gives an oral instruction,
- b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
- c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

Then the confirmation shall constitute the written instruction of the Architect or delegated assistant (as the case may be).

3.4 Replacement of the Engineer

If the Procuring Entity intends to replace the Engineer, the Procuring Entity shall, in not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended person to replace the Engineer.

3.5 Determinations

3.5.1 Whenever these Conditions provide that the Architect shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Architect shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Architect shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.

3.5.1 The Architect shall give notice to both Parties of each agreement or determination, with supporting particulars, within 30 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

4 THE CONTRACTOR

4.1 Contractor's General Obligations

4.1.1 The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Architect instructions, and shall

remedy any defects in the Works.

- 4.12 The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.
- 4.13 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country.
- 4.14 The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.
- 4.15 The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.
- 4.16 If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions:
- a) The Contractor shall submit to the Architect the Contractor's Documents for this part in accordance with the procedures specified in the Contract;
 - b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Architect to add to the Drawings for co-ordination of each Party's designs;
 - c) the Contractor shall be responsible for this part and it shall, when the Works are completed, befit for such purposes for which the part is intended as are specified in the Contract; and
 - d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Architect the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Procuring Entity to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

- 4.21 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the **Special Conditions of Contract** and denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Procuring Entity. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.
- 4.22 The Contractor shall deliver the Performance Security to the Procuring Entity within 30 days after receiving the Notification of Award and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank selected by the Contractor and shall be in the form annexed to the Special Conditions, as stipulated by the Procuring Entity in the Special Conditions of Contract, or in another form approved by the Procuring Entity.
- 4.23 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been

completed and any defects have been remedied.

- 424 The Procuring Entity shall not make a claim under the Performance Security, except for amounts to which the Procuring Entity is entitled under the Contract.
- 425 The Procuring Entity shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Procuring Entity was not entitled to make the claim.
- 426 The Procuring Entity shall return the Performance Security to the Contractor within 14 days after receiving a copy of the Taking-Over Certificate.
- 427 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Architect determines an addition or a reduction to the Contract Price as a result of a change in cost and/ or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Architect request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

4.3 Contractor's Representative

- 431 The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract. The Contractor's Representative's Name and Address shall be provided in the **Special Conditions of Contract**.
- 432 Unless the Contractor's Representative **is named in the Contract**, the Contractor shall, prior to the Commencement Date, submit to the Architect for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of an other suitable person for such appointment.
- 433 The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.
- 434 The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Architect prior consent, and the Architect shall be notified accordingly.
- 435 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].
- 436 The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Architect has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.
- 437 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreter available during all working hours in a number deemed sufficient by the Engineer.

4.4 Sub-contractors

- 441 The Contractor shall not subcontract the whole of the Works. The contractor may however

subcontract the works as provided in Clause 34.2.

4.42 The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were acts or defaults of the Contractor. Unless otherwise stated in the Special Conditions:

- a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;
- b) The prior consent of the Procuring Entity shall be obtained to other proposed Subcontractors;
- c) the Contractor shall give the Procuring Entity not less than 14 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
- d) each subcontract shall include provisions which would entitle the Procuring Entity to require the subcontract to be assigned to the Procuring Entity under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity].

4.43 The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.

4.44 Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from Kenya to be appointed as Subcontractors.

4.5 Assignment of Benefit of Subcontract

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Procuring Entity, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Procuring Entity for the work carried out by the Subcontractor after the assignment takes effect.

4.6 Co-operation

4.6.1 The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:

- a) The Procuring Entity's Personnel,
- b) Any other contractors employed by the Procuring Entity, and
- c) The personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

4.6.2 Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

4.6.3 If, under the Contract, the Procuring Entity is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Architect in the time and manner stated in the Specification.

4.7 Setting Out of the Works

4.7.1 The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contract notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

- 4.7.2 The Procuring Entity shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.
- 4.7.3 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/or Cost, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such costs accrued, which shall be included in the Contract Price.
- 4.7.4 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to these.

4.8 Safety Procedures

The Contractor shall:

- a) Comply with all applicable safety regulations,
- b) Take care for the safety of all persons entitled to be on the Site,
- c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Procuring Entity's Taking Over], and
- e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 Quality Assurance

- 4.9.1 The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Architect shall be entitled to audit any aspect of the system.
- 4.9.2 Details of all procedures and compliance documents shall be submitted to the Architect or information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor itself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

4.10 Site Data

- 4.10.1 The Procuring Entity shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Procuring Entity's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Procuring Entity shall similarly make available to the Contractor all such data which come into the Procuring Entity's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.
- 4.10.2 To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the

Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- a) The form and nature of the Site, including sub-surface conditions,
- b) the hydrological and climatic conditions,
- c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
- d) the Laws, procedures and labour practices of Kenya, and
- e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

4.11 Sufficiency of the Accepted Contract Amount

4.11.1 The Contractor shall be deemed to:

- a) Have satisfied itself as to the correctness and sufficiency of the Accepted Contract Amount, and
- b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

4.11.2 Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

4.12.1 In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

4.12.2 If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Architect as soon as practicable.

4.12.3 This notice shall describe the physical conditions, so that they can be inspected by the Architect and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Architect may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

4.12.4 If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost, which shall be included in the Contract Price.

4.12.5 Upon receiving such notice and inspecting and/or investigating these physical conditions, the

Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

4.12.6 However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Architect may also review whether other physical conditions in similar parts of the Works (if any) were more favorable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favorable conditions were encountered, the Architect may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

4.12.7 The Architect shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made available by the Contractor, but shall not be bound by the Contractor's interpretation of any such evidence.

4.13 Rights of Way and Facilities

Unless otherwise specified in the Contract the Procuring Entity shall provide effective access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

4.14 Avoidance of Interference

4.14.1 The Contractor shall not interfere unnecessarily or improperly with:

- a) The convenience of the public, or
- b) The access to and use and occupation of all roads and foot paths, irrespective of whether they are public or in the possession of the Procuring Entity or of others.

4.14.2 The Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

4.15.1 The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

4.15.2 Except as otherwise stated in these Conditions:

- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- c) the Procuring Entity shall not be responsible for any claims which may arise from the use or otherwise of any access route;

- d) the Procuring Entity does not guarantee the suitability or a availability of particular access routes; and
- e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Special Conditions:

- a) the Contractor shall give the Architect not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- c) the Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

4.18 Protection of the Environment

4.18.1 The contractor shall comply with the applicable environmental laws, regulations and policies.

4.18.2 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

4.18.3 The Contractors shall ensure that emissions, surfaced is charges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

4.19 Electricity, Water and Gas

4.19.1 The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.

4.19.2 The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specifications. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.

4.19.3 The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Architect in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

4.20 Procuring Entity's Equipment and Free-Issue Materials

- 4.20.1 The Procuring Entity shall make the Procuring Entity's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:
- a) The Procuring Entity shall be responsible for the Procuring Entity's Equipment, except that
 - b) the Contractor shall be responsible for each item of Procuring Entity's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.
- 4.20.1 The appropriate quantities and the amounts due (at such stated prices) for the use of Procuring Entity's Equipment shall be agreed or determined by the Architect in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.
- 4.20.2 The Procuring Entity shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Procuring Entity shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them and shall promptly give notice to the Architect of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Procuring Entity shall immediately rectify the notified shortage, defect or default.
- 4.20.3 After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Procuring Entity of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

- 4.21.1 Unless otherwise stated in the Special Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Architect in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.
- 4.21.2 Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:
- a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - b) photographs showing the status of manufacture and of progress on the Site;
 - c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - i) commencement of manufacture,
 - ii) Contractor's inspections,
 - iii) tests, and
 - iv) shipment and arrival at the Site;
 - d) the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];

- e) copies of quality assurance documents, test results and certificates of Materials;
- f) list of notices given under Sub-Clause 2.5 [Procuring Entity's Claims] and notices given under Sub- Clause 20.1 [Contractor's Claims];
- g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
- h) comparison so factual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Special Conditions:

- a) The Contractor shall be responsible for keeping unauthorized persons off the Site, and
- b) authorized persons shall be limited to the Contractor's Personnel and the Procuring Entity's Personnel; and to any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as authorized personnel of the Procuring Entity's other contractors on the Site.

4.23 Contractor's Operations on Site

423.1 The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Architect as additional working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacentl and.

423.2 During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

423.3 Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfil obligations under the Contract.

4.24 Fossils

424.1 All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Procuring Entity. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

424.2 The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub- Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost, which shall be included in the Contract Price.
- After receiving this further notice, the Architect shall proceed in accordance with Sub-

Clause 3.5 [Determinations] to agree or determine these matters.

5 NOMINATED SUBCONTRACTORS

5.1 Definition of “nominated Subcontractor”

In this Contract, “nominated Subcontractor” means a Subcontractor:

- a) Who is nominated by the Procuring Entity, or
- b) Contractor has nominated as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

5.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Procuring Entity as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Procuring Entity agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- b) the nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- c) the nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:
 - i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
 - ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities, and
 - iii) be paid only if and when the Contractor has received from the Procuring Entity payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

5.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Architect certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

5.4 Evidence of Payments

5.4.1 Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Architect may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) Submits this reasonable evidence to the Engineer, or
- (b)
 - i) Satisfies the Architect in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
 - ii) Submits to the Architect reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, then the Procuring Entity may (at his

sole discretion) pay, directly to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Procuring Entity, the amount which the nominated Subcontractor was directly paid by the Procuring Entity.

6 STAFF AND LABOR

6.1 Engagement of Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within Kenya.

6.2 Rates of Wages and Conditions of Labor

6.2.1 The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by Procuring Entity's whose trade or industry is similar to that of the Contractor.

6.2.2 The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in Kenya in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of Kenya for the time being in force, and the Contractor shall perform such duties in regard to such deductions there of as may be imposed on him by such Laws.

6.3 Persons in the Service of Procuring Entity

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Procuring Entity's Personnel.

6.4 Lab or Laws

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, employment of children, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights. The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

6.5 Working Hours

Nowork shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the **Special Conditions of Contract**, unless:

- a) Otherwise stated in the Contract,
- b) The Architect gives consent, or
- c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer, provided that work done outside the normal working hours shall be considered and paid for as overtime.

6.6 Facilities for Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all

necessary accommodation and welfare facilities on site for the Contractor's Personnel. The Contractor shall also provide facilities for the Procuring Entity's Personnel as stated in the Specifications. The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

6.7.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Procuring Entity's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

6.7.2 The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide what ever is required by this person to exercise this responsibility and authority.

6.7.3 The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Architect may reasonably require.

6.7.4 The Contractor shall conduct an awareness programme on HIV and other sexually transmitted diseases via an approved service provider and shall undertake such other measures taken to reduce the risk of the transfer of these diseases between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

6.8 Contractor's Superintendence

6.8.1 Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary super intendence to plan, arrange, direct, manage, inspect and test the work.

6.8.2 Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

6.9 Contractor's Personnel

6.9.1 The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractors Key personnel shall be named in the Special Conditions of Contract. The Architect may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- a) Persists in any misconduct or lack of care,
- b) Carries out duties in competently or negligently,
- c) fails to conform with any provisions of the Contract,
- d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
- e) based on reasonable evidence, is determined to have engaged in Fraud and

Corruption during the execution of the Works.

6.92 If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

6.12 Foreign Personnel

6.12.1 The Contractor shall not employ foreign personnel unless the contractor demonstrates that there are no Kenyans with the required skills.

6.12.2 The Contractor shall be responsible for the return of any foreign personnel to the place where they were recruited or to their domicile. In the event of the death in Kenya of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

6.13 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

6.14 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

6.15 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of Kenya, onsite, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.

6.16 Prohibition of Forced or Compulsory Labour

The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

6.17 Prohibition of Harmful Child Labor

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant

labour laws of Kenya have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

6.18 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

6.19 Workers' Organizations

The Contractor shall comply with the relevant labor laws that recognize workers' rights to form and to join workers' organizations of their choosing without interference.

6.20 Non-Discrimination and Equal Opportunity

The Contractor shall base the labour employment on the principle of equal opportunity and fair treatment and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline.

7. PLANT, MATERIALS AND WORKMANSHIP

7.1 Manner of Execution

The Contractor shall carry out the manufacture/assemble of plant, the production and manufacture of Materials, and all other execution of the Works:

- a) In the manner (if any) specified in the Contract,
- b) in a proper workman like and careful manner, in accordance with recognized good practice, and
- c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

The Contractor shall submit the following samples of Materials, and relevant information, to the Architect for consent prior to using the Material in or for the Works:

- a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- b) additional samples instructed by the Architect as a Variation.

Each sample shall be labeled as to origin and intended use in the Works.

7.3 Inspection

7.3.1 The Procuring Entity's Personnel shall at all reasonable times:

- a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of

Materials.

732 The Contractor shall give the Procuring Entity's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

733 The Contractor shall give notice to the Architect whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Architect shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Architect does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and there after reinstate and make good, all at the Contractor's cost.

7.4 Testing

741 This Sub-Clause shall apply to all tests specified in the Contract.

742 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.

743 The Architect may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.

744 The Architect shall give the Contractor not less than 24 hours' notice of the Architect intention to attend the tests. If the Architect does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Architect presence.

745 If the Contractor suffers delay and/ or incurs Cost from complying with these instructions or as a result of a delay for which the Procuring Entity is responsible, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost-plus profit, which shall be included in the Contract Price.

746 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

747 The Contractor shall promptly forward to the Architect duly certified reports of the tests. When the specified tests have been passed, the Architect shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Architect has not attended the tests, he shall be deemed to have accepted the readings as accurate.

7.5 Rejection

751 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Architect may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

7.52 If the Architect requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Procuring Entity to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity.

7.6 Remedial Work

7.6.1 Notwithstanding any previous test or certification, the Architect may instruct the Contractor to:

- a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
- b) remove and re-execute any other work which is not in accordance with the Contract, and
- c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseen able event or otherwise.

7.6.2 The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under subparagraph (c).

7.6.3 If the Contractor fails to comply with the instruction, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity all costs arising from this failure.

7.6.4 If the contractor repeatedly delivers defective work, the Procuring Entity may consider termination in accordance with Clause 15.

7.7 Ownership of Plant and Materials

Except as otherwise provided in the Contract, each item of Plant and Materials shall become the property of the Procuring Entity at whichever is the earlier of the following times, free from liens and other encumbrances:

- a) When it is incorporated in the Works;
- b) when the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

7.8 Royalties

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- a) Natural materials obtained from outside the Site, and
- b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal are as within the Site are specified in the Contract.

8 COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

8.1.1 Except as otherwise specified in the Special Conditions of Contract, the Commencement Date shall be the date at which the following precedent condition have all been fulfilled and the Architect notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- a) Signature of the Contract Agreement by both Parties, and if required, approval of the

Contract by relevant authorities of Kenya;

- b) except if otherwise specified in the Special Conditions of Contract, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works.
- c) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.

8.12 If the said Architect instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 6.2 [Termination by Contractor].

8.13 The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- a) Achieving the passing of the Test on Completion, and
- b) completing all work which is stated in the Contract as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections].

8.3 Programme

8.3.1 The Contractor shall submit a detailed time programme to the Architect within 4 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

- a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
- b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
- c) the sequence and timing of inspections and tests specified in the Contract, and
- d) a supporting report which includes:
 - i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
 - ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

- 832 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.
- 833 The Contractor shall promptly give notice to the Architect of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works.
- 834 If, at anytime, the Architect gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contractor to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Architect in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

- 841 The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking Over of the Works and Sections] is or will be delayed by any of the following causes:
- a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
 - b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
 - c) exceptionally adverse climatic conditions,
 - d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
 - e) any delay, impediment or prevention caused by or attributable to the Procuring Entity, the Procuring Entity's Personnel, or the Procuring Entity's other contractors.
- 842 If the Contractor considers itself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Architect in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Architect shall review previous determinations and may increase, but shall not decrease, the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in Kenya,
- b) These authorities delay or disrupt the Contractor's work, and
- c) the delay or disruption was Unforeseeable, then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

8.6 Rate of Progress

861 If, at anytime:

- a) Actual progress is too slow to complete within the Time for Completion, and/or
- b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme], other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Architect may instruct the Contractor to submit, under Sub-Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

862 Unless the Architect notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Procuring Entity to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity, in addition to delay damages (if any) under Sub-Clause 8.7 below.

863 Additional costs of revised methods including acceleration measures, instructed by the Architect to reduce delays resulting from causes listed under Sub-Clause 8.4 [Extension of Time for Completion] shall be paid by the Procuring Entity, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

871 If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay delay damages to the Procuring Entity for this default. These delay damages shall be the sum stated in the **Special Conditions of Contract**, which shall be paid for everyday which shall elapse between the relevant Time for Completion and the date stated in the taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Special Conditions of Contract.

872 These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

8.8 Suspension of Work

881 The Architect may at anytime instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

882 The Architect may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

8.9 Consequences of Suspension

891 If the Contractor suffers delay and/or incurs Cost from complying with the Architect instructions under Sub-Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under

Sub-Clause 8.4 [Extension of Time for Completion], and

b) Payment of any such Cost, which shall be included in the Contract Price.

892 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

893 The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/ or Materials which have not been delivered to Site, if:

- a) The work on Plant or delivery of Plant and/ or Materials has been suspended for more than 30 days, and
- b) the Contractor has marked the Plant and/or Materials as the Procuring Entity's property in accordance with the Architect instructions.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Architect permission to proceed. If the Architect does not give permission within 30 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Architect shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Architect an instruction to this effect under Clause 13 [Variations and Adjustments].

9 TESTS ON COMPLETION

9.1 Contractor's Obligations

9.1.1 The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

9.1.2 The Contractor shall give to the Architect not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Architect shall instruct.

9.1.3 In considering the results of the Tests on Completion, the Architect shall make allowances for the effect of any use of the Works by the Procuring Entity on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

- 921 If the Tests on Completion are being unduly delayed by the Procuring Entity, Sub-Clause 7.4 [Testing] (fifth paragraph) and/ or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.
- 922 If the Tests on Completion are being unduly delayed by the Contractor, the Architect may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.
- 923 If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Procuring Entity's Personnel may proceed with the Test at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting of related works

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Architect or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

- 941 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Architect shall be entitled to:
- a) Order further repetition of Tests on Completion under Sub-Clause 9.3; or
 - b) if the failure deprives the Procuring Entity of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Procuring Entity shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 1.4 [Failure to Remedy Defects].

10. PROCURING ENTITY'S TAKING OVER

10.1 Taking Over of the Works and Sections

- 10.1.1 Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Procuring Entity when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.
- 10.1.2 The Contractor may apply by notice to the Architect for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.
- 10.1.3 The Architect shall, within 30 days after receiving the Contractor's application:
- a) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
 - b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under his Sub-Clause.
- 10.1.4 If the Architect fails either to issue the Taking-Over Certificate or to reject the Contractor's

application within the period of 30 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

10.2 Taking Over of Parts of the Works

- 102.1 The Architect may, at the sole discretion of the Procuring Entity, issue a Taking-Over Certificate for any part of the Permanent Works.
- 102.2 The Procuring Entity shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Architect has issued a Taking-Over Certificate for this part. However, if the Procuring Entity does use any part of the Works before the Taking-Over Certificate is issued:
- a) The part which is used shall be deemed to have been taken over as from the date on which it is used,
 - b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Procuring Entity, and
 - c) if requested by the Contractor, the Architect shall issue a Taking-Over Certificate for this part.
- 102.3 After the Architect has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.
- 102.4 If the Contractor incurs Cost as a result of the Procuring Entity taking over and/or using a part of the Works, other than such use as is specified in the Contract agreed by the Contractor, the Contractor shall (i) give notice to the Architect and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such accrued costs, which shall be included in the Contract Price. After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this accrued cost.
- 102.5 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages] and shall not affect the maximum amount of these damages.

10.3 Interference with Tests on Completion

- 103.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Procuring Entity is responsible, the Procuring Entity shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.
- 103.2 The Architect shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Architect shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.
- 103.3 If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the

Tests on Completion, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such accrued costs, which shall be included in the Contract Price.

1034 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11. DEFECTS LIABILITY

11.1 Completion of Outstanding Work and Remedying Defects

11.1.1 In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fairwear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable there after, the Contractor shall:

- a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
- b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Procuring Entity on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

11.1.2 If a defect appears or damage occurs, the Contractor shall be notified accordingly by the Engineer.

11.2 Cost of Remedying Defects

11.2.1 All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- a) Any design for which the Contractor is responsible,
- b) Plant, Materials or workmanship not being in accordance with the Contract, or
- c) Failure by the Contractor to comply with any other obligation.

11.2.2 If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity, and Sub-Clause 13.3 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

11.3.1 The Procuring Entity shall be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

11.3.2 If delivery and/ or erection of Plant and/ or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defect or damage occurring

more than two years after the Defects Notification Period for the Plant and/ or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

- 11.4.1 If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by the Engineer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.
- 11.4.2 If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Procuring Entity may (at his option):
- (a) Carry out the work itself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity the costs reasonably incurred by the Procuring Entity in remedying the defect or damage;
 - (b) Require the Architect to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or
 - (c) if the defect or damage deprives the Procuring Entity of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract otherwise, the Procuring Entity shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defector damage cannot be remedied expeditiously on the Site and the Procuring Entity gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

- 11.6.1 If the work of remedying of any defector damage may affect the performance of the Works, the Architect may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 14 days after the defect or damage is remedied.
- 11.6.2 These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

Until the Completion Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Procuring Entity's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect on parts of the works that have already accepted, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Architect in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the

Contract Price.

11.9 Completion Certificate

- 11.9.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Architect has issued the Completion Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.
- 11.9.2 The Architect shall issue the Completion Certificate within 30 days after the latest of the expiry dates of the Defects Liability Period, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Completion Certificate shall be issued to the Procuring Entity.
- 11.9.3 Only the Completion Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Completion Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

- 11.11.1 Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.
- 11.11.2 If all these items have not been removed within 30 days after receipt by the Contractor of the Completion Certificate, the Procuring Entity may sell or otherwise dispose of any remaining items. The Procuring Entity shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.
- 11.11.3 Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Procuring Entity's costs, the Contractor shall pay the outstanding balance to the Procuring Entity.

12 MEASUREMENT AND DEVALUATION

12.1 Works to be Measured

- 12.1.1 The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.
- 12.1.2 Whenever the Architect requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:
- a) promptly either attend or send another qualified representative to assist the Architect in making the measurement, and
 - b) supply any particulars requested by the Engineer.
- 12.1.3 If the Contractor fails to attend or send a representative, the measurement made by the Architect shall be accepted as accurate.
- 12.1.4 Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as

and when requested, attend to examine and agree her records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

- 12.15 If the Contractor examines and disagrees the records, and/ or does not sign them as agreed, then the Contractor shall give notice to the Architect of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Architect shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Architect within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract:

- a) Measurement shall be made of the net actual quantity of each item of the Permanent Works, and
- b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

- 12.3.1 Except as otherwise stated in the Contract, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of work one by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.

- 12.3.2 For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contractor, if there is no such item, specified for similar work.

- 12.3.3 Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.

- 12.3.4 However, for a new item of work, a new rate or price shall be appropriate for such item of work if:

- a) The work is instructed under Clause 13 [Variations and Adjustments],
- b) no rate or price is specified in the Contract for this item, and
- c) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

- 12.3.5 Each new rate or price shall be derived from any relevant rates or prices in the Contract. If no rates or prices are relevant for the new item of work, it shall be derived from the reasonable Cost of executing such work, prevailing market rates, together with profit, taking account of any other relevant matters.

- 12.3.6 Until such time as an appropriate rate or price is agreed or determined, the Architect shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.

- 12.3.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (*which would be the tender price*), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- c) this cost is not deemed to be included in the evaluation of any substituted work; then the Contractor shall give notice to the Architect accordingly, with supporting particulars. Upon receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

13 VARIATIONS AND ADJUSTMENTS

13.1 Right to Vary

13.1.1 Variations may be initiated by the Architect at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal. No Variation instructed by the Architect under this Clause shall in any way vitiate or invalidate the Contract.

13.1.2 The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Architect stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Architect shall cancel, confirm or vary the instruction.

13.1.3 Each Variation may include:

- a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
- b) changes to the quality and other characteristics of any item of work,
- c) changes to the levels, positions and/ or dimensions of any part of the Works,
- d) omission of any work unless it is to be carried out by others,
- e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
- f) changes to the sequence or timing of the execution of the Works.

13.1.4 The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Architect instructs after obtaining approval of the Procuring Entity.

13.2 Variation Order Procedure

13.2.1 Prior to any Variation Order under Sub-Clause 13.1.4 the Architect shall notify the Contractor of the nature and form of such variation. As soon as possible after having received such notice, the Contractor shall submit to the Engineer:

- a) A description of work, if any, to be performed and a programme for its execution, and
- b) the Contractor's proposals for any necessary modifications to the Programme according to Sub-Clause 8.3 or to any of the Contractor's obligations under the Contract, and
- c) the Contractor's proposals for adjustment to the Contract Price.

Following the receipt of the Contractor's submission the Architect shall, after due consultation with the Employer and the Contractor, decide as soon as possible whether or

not the variation shall be carried out. If the Architect decides that the variation shall be carried out, he shall issue a Variation Order clearly identified as such in accordance with the Contractor's submission or as modified by agreement.

If the Architect and the Contractor are unable to agree the adjustment of the Contract Price, the provisions of Sub-Clause 13.2.2 shall apply.

13.2.2 Disagreement on Adjustment of the Contract Price

If the Contractor and the Architecture unable to agree on the adjustment of the Contract Price, the adjustment shall be determined in accordance with the rates specified in the Bills of Quantities or Schedule of Daywork Prices. If the rates contained in the Bills of Quantities or Dayworks Prices are not directly applicable to the specific work in question, suitable rates shall be established by the Architect reflecting the level of pricing in the Dayworks Prices. Where rates are not contained in the said Prices, the amount shall be such as is in all the circumstances reasonable, reflecting a market price. Due account shall be taken of any over- or under-recovery of overheads by the Contractor in consequence of the variation. The Contractor shall also be entitled to be paid:

- a) The cost of any partial execution of the Work rendered useless by any such variation,
- b) The cost of making necessary alterations to Plant already manufactured or in the course of manufacture or of any work done that has to be altered in consequence of such a variation,
- c) any additional costs incurred by the Contractor by the disruption of the progress of the Works as detailed in the Programme, and
- d) the net effect of the Contractor's finance costs, including interest, caused by the variation.

The Architect shall on this basis determine the rates or prices to enable on-account payment to be included in certificates of payment.

13.2.3 Contractor to Proceed

On receipt of a Variation Order, the Contractor shall forth with proceed to carry out the variation and be bound to these Conditions in so doing as if such variation was stated in the Contract. The work shall not be delayed pending the granting of an extension of the Time for Completion or an adjustment to the Contract Price under Sub-Clause 31.3.

13.3 Value Engineering

13.3.1 The Contractor may, at anytime, submit to the Architect written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Procuring Entity of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Procuring Entity of the completed Works, or (iv) otherwise be of benefit to the Procuring Entity.

13.3.2 The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].

13.3.3 If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- a) The Contractor shall design this part,
- b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
- c) if this change results in a reduction in the contract value of this part, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be (50%) of the difference between the following amounts:
 - i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause

13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and

- ii) the reduction (if any) in the value to the Procuring Entity of the varied works, taking account of any improvement in quality, anticipated life or operational efficiencies.

13.3.4 However, if the amount established in item 13.2.3 (c) (i) is less than amount established in item 13.2.3 (c) (ii), there shall not be a fee. However, if the if the amount established in item 13.2.3 (c) (i) is more than amount established in item 13.2.3 (c) (ii), it shall result in a price variation to the Procuring Entity.

134 Variation Procedure for Value Engineering proposal

- 134.1 If the Architect requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:
- a) A description of the proposed work to be performed and a programme for its execution,
 - b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
 - c) the Contractor's proposal for evaluation of the Variation.
- 134.2 The Architect shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Project Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst a waiting a response.
- 134.3 Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Architect to the Contractor, who shall acknowledge receipt.
- 134.4 Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Architect instructs or approves otherwise in accordance with this Clause.

135 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

136 Provisional Sums

- 136.1 Each Provisional Sum shall only be used, in whole or in part, in accordance with the Architect instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Architect shall have instructed. For each Provisional Sum, the Architect May instruct:
- a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or
 - b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:
 - i) The actual amounts paid (or due to be paid) by the Contractor, and
 - ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in **the Special Conditions**

of Contract shall be applied.

13.6.2 The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.4 Dayworks

13.4.1 For work of a minor or incidental nature, the Architect may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

13.4.2 Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

13.4.3 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Architect accurate statements induplicate which shall include the following details of the resources used in executing the previous day's work:

- a) The names, occupations and time of Contractor's Personnel,
- b) the identification, type and time of Contractor's Equipment and Temporary Works, and
- c) the quantities and types of Plant and Materials used.

13.4.4 One copy of each statement will, if correct, or when agreed, be signed by the Architect and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

13.5 Adjustments for Changes in Legislation

13.5.1 The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of Kenya (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

13.5.2 If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost, which shall be included in the Contract Price.

13.5.3 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

13.5.4 Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [Adjustments for Changes in Cost].

13.6 Adjustments for Changes in Cost

13.6.1 In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

- 13.62 If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labor, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.
- 13.63 The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae

Price Adjustment Formula

Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B I_m/I_o$$

where:

P is the adjustment factor for the portion of the Contract Price payable.

A and **B** are recoefficients **specified in the SCC**, representing then on adjustable and adjustable portions, respectively, of the Contract Price payable and

I_m is the index prevailing at the end of the month being invoiced and **I_o** is the index prevailing 30 days before Bid opening for inputs payable.

NOTE: The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the non adjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each

- 13.64 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. Forth is purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.
- 13.65 In cases where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the Central Bank of Kenya, of this relevant currency on the above date for which the index is required to be applicable.
- 13.66 Until such time as each current cost index is available, the Architect shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.
- 13.67 If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices there after shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, whichever is more favorable to the Procuring Entity.

13.6.8 The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14 CONTRACT PRICE AND PAYMENT

14.1 The Contract Price

14.1.1 Unless otherwise stated in the Special Conditions:

- a) The value of the payment certificate shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
- b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
- c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
 - i) of the Works which the Contractor is required to execute, or
 - ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
- d) the Contractor shall submit to the Engineer, within 30 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Architect may take account of the break down when preparing Payment Certificates but shall not be bound by it.

14.1.2 Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts there for, imported by the Contractor for the sole purpose of executing the Contract shall not be exempt from the payment of import duties and taxes upon importation.

14.2 Advance Payment

14.2.1 The Procuring Entity shall make an advance payment, as an interest-free loan for mobilization and cashflow support, when the Contractor submits a guarantee in accordance with this Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the **Special Conditions of Contract**.

14.2.2 Unless and until the Procuring Entity receives this guarantee, or if the total advance payment is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.

14.2.3 The Architect shall deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Procuring Entity receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institutions elected by the Contractor and shall be in the form annexed to the Special Conditions or in another form approved by the Procuring Entity.

14.2.4 The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

14.2.5 Unless stated otherwise in the **Special Conditions of Contract**, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Architect in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:

- a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount less Provisional Sums; and
- b) deductions shall be made at the amortization rate stated in the **Special Conditions of Contract** of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.

14.2.6 If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Procuring Entity], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Procuring Entity], except for Sub-Clause 14.2.7 [Procuring Entity's Entitlement to Termination for Convenience], payable by the Contractor to the Procuring Entity.

14.3 Application for Interim Payment Certificates

14.3.1 The Contractor shall submit a Statement (in number of copies indicated in the **Special Conditions of Contract**) to the Architect after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to be entitled, together with supporting documents which shall include there portion the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].

14.3.2 The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
- c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the **Special Conditions of Contract** to the total of the above amounts, until the amount so retained by the Procuring Entity reaches the limit of Retention Money (if any) stated in the **Special Conditions of Contract**;
- d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];
- e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- f) any other additions or deductions which may have become due under the Contractor otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- g) the deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments

- 144.1 If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:
- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
 - b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
 - c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Architect may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.
- 144.2 If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

- 145.1 If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].
- 145.2 If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.
- 145.3 The Architect shall determine and certify each addition if the following conditions are resatisfied:
- a) The Contractor has:
 - i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
 - (ii) submitted statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;and either:
 - b) the relevant Plant and Materials:
 - i) are those listed in the Schedules for payment when shipped,
 - ii) have been shipped to Kenya, enroute to the Site, in accordance with the Contract; and
 - iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Architect together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Procuring Entity in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration; or
 - c) the relevant Plant and Materials:
 - i) are those listed in the Schedules for payment when delivered to the Site, and
 - ii) have been delivered to and are properly stored on the Site, are protected against

loss, damage or deterioration and appear to be in accordance with the Contract.

14.5.4 The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Architect determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

14.5.5 The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

14.6.1 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the Architect shall, within 30 days after receiving a Statement and supporting documents, deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate which shall state the amount which the Architect fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Architect on the Statement if any.

14.6.2 However, prior to issuing the Taking-Over Certificate for the Works, the Architect shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the **Special Conditions of Contract**. In this event, the Architect shall give notice to the Contractor accordingly.

14.6.3 An Interim Payment Certificate shall not be withheld for any other reason, although:

- a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

4.6.4 The Architect may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Architect acceptance, approval, consent or satisfaction.

14.7 Payment

14.7.1 The Procuring Entity shall pay to the Contractor:

- a) The advance payment shall be paid within 60 days after signing of the contract by both parties or within 60 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;
- b) The amount certified in each Interim Payment Certificate within 60 days after the Architect Issues Interim Payment Certificate; and
- c) the amount certified in the Final Payment Certificate within 60 days after the Procuring Entity Issues Interim Payment Certificate; or after determination of any disputed amount shown in the Final Statement in accordance with Sub-Clause 16.2 [Termination by Contractor].

14.7.2 Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (forth is currency) specified in the Contract.

14.8 Delayed Payment

- 14.8.1 If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges (simple interest) monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b) of the date on which any Interim Payment Certificate is issued.
- 14.8.2 These financing charges shall be calculated at the annual rate of three percentage points above the mean rate of the Central Bank in Kenya of the currency of payment, or if not available, the inter bank offered rate, and shall be paid in such currency.
- 14.8.3 The Contractor shall be entitled to this payment without formal notice and certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

- 14.9.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.
- 14.9.2 Promptly after the latest of the expiry dates of the Defects Liability Periods, the outstanding balance of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.
- 14.9.3 However, if any work remains to be executed under Clause 11 [Defects Liability], the Architects shall be entitled to withhold certification of the estimated cost of this work until it has been executed.
- 14.9.4 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].
- 14.9.5 Unless otherwise stated in the Special Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a Retention Money Security guarantee, in the form annexed to the Special Conditions or in another form approved by the Procuring Entity and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money.
- 14.9.6 The Procuring Entity shall return the Retention Money Security guarantee to the Contractor within 14 days after receiving a copy of the Completion Certificate.

14.10 Statement at Completion

- 14.10.1 Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Architect three copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:
- a) the value of all work done in accordance with the Contract up to the date stated in

- the Taking-Over Certificate for the Works,
- b) any further sums which the Contractor considers to be due, and
- c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

14.10.2 The Architect shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

14.11 Application for Final Payment Certificate

14.11.1 Within 60 days after receiving the Completion Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- a) The value of all work done in accordance with the Contract, and
- b) Any further sums which the Contractor considers to be due to him under the Contractor otherwise.

14.11.2 If the Architect disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Architect may reasonably require within 30 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Architect the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

14.11.3 However, if, following discussions between the Architect and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Architect shall deliver to the Procuring Entity (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [Obtaining Dispute Board's Decision] or Sub-Clause 20.5 [Amicable Settlement], the Contractor shall then prepare and submit to the Procuring Entity (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the out standing balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

14.13.1 Within 30 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall deliver, to the Procuring Entity and to the Contractor, the Final Payment Certificate which shall state:

- a) The amount which he fairly determines is finally due, and
- b) After giving credit to the Procuring Entity for all amounts previously paid by the Procuring Entity and for all sums to which the Procuring Entity is entitled, the balance (if any) due from the Procuring Entity to the Contractor or from the Contractor to the Procuring Entity, as the case may be.

14.13.2 If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall request the Contractor to do so. If the Contractor fails to submit an

application within a period of 30 days, the Architect shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Procuring Entity's Liability

14.14.1 The Procuring Entity shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- a) in the Final Statement and also,
- b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

14.14.2 However, this Sub-Clause shall not limit the Procuring Entity's liability under his indemnification obligations, or the Procuring Entity's liability in any case of fraud, deliberate default or reckless misconduct by the Procuring Entity.

14.15 Currencies of Payment

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:

- a) If the Accepted Contract Amount was expressed in Local Currency only:
 - i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
 - ii) payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
 - iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a) (i) above;
- b) payment of the damages specified in the Special Conditions of Contract, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- c) other payments to the Procuring Entity by the Contractor shall be made in the currency in which the sum was expended by the Procuring Entity, or in such currency as may be agreed by both Parties;
- d) if any amount payable by the Contractor to the Procuring Entity in a particular currency exceeds the sum payable by the Procuring Entity to the Contractor in that currency, the Procuring Entity may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the Central Bank of Kenya.

15 TERMINATION BY PROCURING ENTITY

15.1 Notice to correct any defects or failures

If the Contractor fails to carry out any obligation under the Contract, the Architect may by notice require the Contractor to make good the failure and to remedy it within 30 days.

15.2 Termination by Procuring Entity

- 152.1 The Procuring Entity shall be entitled to terminate the Contract if the Contractor breaches the contract based on following circumstances which shall include but not limited to:
- a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
 - b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
 - c) without reasonable excuse fails:
 - i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
 - ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 30 days after receiving it,
 - d) subcontracts the major part or whole of the Works or assigns the Contract without the consent of the Procuring Entity,
 - e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
 - f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an induce mentor reward:
 - i) for doing or for bearing to do any action in relation to the Contract, or
 - ii) for showing or for bearing to show favor or disfavor to any person in relation to the Contract, or
 - iii) if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such induce mentor reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination, or
 - g) If the contract or repeatedly fails to remedy delivers defective work,
 - h) based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Appendix B to these General Conditions, incompeting for or in executing the Contract.
- 152.2 In any of these events or circumstances, the Procuring Entity may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub- paragraph (e) or (f) or (g) or (h), the Procuring Entity may by notice terminate the Contract immediately.
- 152.3 The Procuring Entity's election to terminate the Contract shall not prejudice any other rights of the Procuring Entity, under the Contractor otherwise.
- 152.4 The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.
- 152.5 After termination, the Procuring Entity may complete the Works and/ or arrange for any other entities to do so. The Procuring Entity and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.
- 152.6 The Procuring Entity shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the

Contractor has failed to make a payment due to the Procuring Entity, these items may be sold by the Procuring Entity in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

15.4 Payment after Termination

After a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Procuring Entity may:

- a) Proceed in accordance with Sub-Clause 2.5 [Procuring Entity's Claims],
- b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Procuring Entity, have been established, and/ or
- c) recover from the Contractor any losses and damages incurred by the Procuring Entity and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Procuring Entity shall pay any balance to the Contractor.

15.5 Procuring Entity's Entitlement to Termination for Convenience

The Procuring Entity shall be entitled to terminate the Contract, at any time at the Procuring Entity's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after the later of the dates on which the Contractor receives this notice or the Procuring Entity returns the Performance Security. The Procuring Entity shall not terminate the Contract under this Sub-Clause in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [Termination by Contractor]. After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

15.6 Fraud and Corruption

The Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions.

15.7 Corrupt gifts and payments of commission

15.7.1 The Contractor shall not;

- a) Offer or give or agree to give to any person in the service of the Procuring Entity any gift or consideration of any kind as an inducement or reward for doing or for bearing to door for having done or for borne to do any act in relation to the obtaining or execution of this or any other Contract for the Procuring Entity or for showing or for bearing to show favor or disfavor to any person in relation to this or any other contract for the Procuring Entity.
- b) Enter into this or any other contract with the Procuring Entity 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 there of have been disclosed in writing to the Procuring Entity.

15.72 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 and Asset Disposal Act (2015) and the Anti-Corruption and Economic Crimes Act (2003) of the Laws of Kenya.

16 SUSPENSION AND TERMINATION BY CONTRACTOR

16.1 Contractor's Entitlement to Suspend Work

16.1.1 If the Architect fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or Sub-Clause 14.7 [Payment], or not receiving instructions that would enable the contractor to proceed with the works in accordance with the program, the Contractor may, after giving not less than 30 days' notice to the Procuring Entity, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

16.1.2 The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].

16.1.3 If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

16.1.4 If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost-plus profit, which shall be included in the Contract Price.

16.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

16.3 Termination by Contractor

16.3.1 The Contractor shall be entitled to terminate the Contract if:

- a) the Architect fails, within 60 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
- b) the Contractor does not receive the amount due under an Interim Payment Certificate within 90 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [Procuring Entity's Claims]),
- c) the Procuring Entity substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,
- d) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
- e) the Procuring Entity becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or

carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.

- f) the Contractor does not receive the Architect instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

1632 In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Procuring Entity, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

1633 The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract otherwise.

16.4 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

- a) cease all further work, except for such work as may have been instructed by the Architect for the protection of life or property or for the safety of the Works,
- b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment, and
- c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

16.5 Payment on Termination

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, the Procuring Entity shall promptly:

- a) Return the Performance Security to the Contractor,
- b) pay the Contractor in accordance with Sub-Clause 19.6 [Optional Termination, Payment and Release], and
- c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

17. RISK AND RESPONSIBILITY

17.1 Indemnities

17.1.1 The Contractor shall indemnify and hold harmless the Procuring Entity, the Procuring Entity's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- a) Bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and
- b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.12 The Procuring Entity shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property], unless and to the extent that any such damage or loss is attributable to any negligence, willful actor breach of the Contract by the contractor, the contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.2 Contractor's Care of the Works

17.2.1 The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Procuring Entity. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Procuring Entity.

17.2.2 After responsibility has accordingly passed to the Procuring Entity, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

17.2.3 If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

17.2.4 The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Procuring Entity's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of Procuring Entity's Risks] below, in so far as they directly affect the execution of the Works in Kenya, are:

- a) War hostilities (whether war be declared or not),
- b) rebellion, riot, commotion or disorder, terrorism, sabotage by persons other than the Contractor's Personnel,
- c) explosive materials, ionizing gradiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such explosives, radiation or radio-activity,
- d) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
- e) use or occupation by the Procuring Entity of any part of the Permanent Works, except as may be specified in the Contract,
- f) design of any part of the Works by the Procuring Entity's Personnel or by others for whom the Procuring Entity is responsible, and
- g) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

17.4 Consequences of Procuring Entity's Risks

- 174.1 If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Architect and shall rectify this loss or damage to the extent required by the Engineer.
- 174.2 If the Contractor suffers delay and/ or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - (b) payment of any such Cost, which shall be included in the Contract Price. In the case of subparagraphs (e) and
 - (g) of Sub-Clause 17.3 [Procuring Entity's Risks], Accrued Costs shall be payable.
- 174.3 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

17.5 Intellectual and Industrial Property Rights

- 175.1 In this Sub-Clause, "infringement" shall refer to an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" shall refer to a claim (or proceedings pursuing a claim) alleging an infringement.
- 175.2 Whenever a Party does not give notice to the other Party of any claim within 30 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.
- 175.3 The Procuring Entity shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:
- a) An unavoidable result of the Contractor's compliance with the Contract, or
 - b) A result of any Works being used by the Procuring Entity:
 - i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
 - ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.
- 175.4 The Contractor shall indemnify and hold the Procuring Entity harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.
- 175.5 If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.
- 175.6 For operation and maintenance of any plant or equipment installed, the contractor shall grant a non-exclusive and non-transferable license to the Procuring Entity under the patent, utility models, or other intellectual rights owned by the contractor or a third party from whom the contractor has received the rights to grant sub-licenses and shall also grant to the Procuring Entity a non-exclusive and non-transferable rights (without the rights to sub-license) to use the know how and other technical information disclosed to the contractor or under the contract. Nothing contained here-in shall be construed as transferring ownership

of any patent, utility model, trademark, design, copy right, know-how or other intellectual rights from the contractor or any other third party to the Procuring Entity.

17.6 Limitation of Liability

17.6.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any in director consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4(b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

17.6.2 The total liability of the Contractor to the Procuring Entity, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Procuring Entity's Equipment and Free- Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in **the Special Conditions of Contract**, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.

17.6.3 This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Procuring Entity's Accommodation/Facilities

17.7.1 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

17.7.2 If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Procuring Entity is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18 INSURANCE

18.1 General Requirements for Insurances

18.1.1 In this Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

18.1.2 Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Procuring Entity. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.3 Wherever the Procuring Entity is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.4 If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint

insured except that the Procuring Entity shall act for Procuring Entity's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

- 18.15 Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.
- 18.16 The relevant insuring Party shall, within the respective periods stated in **the Special Conditions of Contract** (calculated from the Commencement Date), submit to the other Party:
- a) Evidence that the insurances described in this Clause have been affected, and
 - b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].
- 18.17 When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.
- 18.18 Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.
- 18.19 Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or at tempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.
- 18.1.10 If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contractor fails to provide satisfactory evidence and copies of policies in accordance with this Sub- Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.
- 18.1.11 Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Procuring Entity, under the other terms of the Contractor otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Procuring Entity.
- 18.1.12 Procuring Entity in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.
- 18.1.13 Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Procuring Entity's Claims] or Sub- Clause 20.1 [Contractor's Claims], as applicable.
- 18.1.14 The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

- 18.2.1 The insuring Party shall insure the Works, Plant, Material and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.
- 18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).
- 18.2.3 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.
- 18.2.4 Unless otherwise stated in the Special Conditions, insurances under this Sub-Clause:
- a) shall be effected and maintained by the Contractor as insuring Party,
 - b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
 - c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks],
 - d) shall also cover, to the extent specifically required in the tendering documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Procuring Entity of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Procuring Entity's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated **in the Special Conditions** of Contract (if an amount is not so stated, this sub-paragraph (d) shall not apply), and
 - e) may however exclude loss of, damage to, and reinstatement of:
 - i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
 - ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
 - iii) a part of the Works which has been taken over by the Procuring Entity, except to the extent that the Contractor is liable for the loss or damage, and
 - iv) Goods while they are not in Kenya, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].
- 18.2.5 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against Injury to Persons and Damage to Property

- 183.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.
- 183.2 This insurance shall be for a limit per occurrence of not less than the amount stated in **the Special Conditions of Contract**, with no limit on the number of occurrences. If an amount is not stated in the **Special Conditions of Contract**, this Sub-Clause shall not apply.
- 183.3 Unless otherwise stated in the Special Conditions, the insurances specified in this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
 - b) shall be in the joint names of the Parties,
 - c) shall be extended to cover liability for all loss and damage to the Procuring Entity's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
 - d) may however exclude liability to the extent that it arises from:
 - i) the Procuring Entity's right to have the Permanent Works executed on, over, under, in or
 - ii) through any land, and to occupy this land for the Permanent Works,
 - iii) damage which is an unavoidable result of the Contractor's obligations to execute the
 - iv) Works and remedy any defects, and
 - v) a cause listed in Sub-Clause 17.3 [Procuring Entity's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

- 184.1 The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.
- 184.2 The insurance shall cover the Procuring Entity and the Architect against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Procuring Entity or of the Procuring Entity's Personnel.
- 184.3 The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19. FORCE MAJEURE

19.1 Definition of Force Majeure

- 19.1.1 In this Clause, "Force Majeure" means an exceptional event or circumstance:
- a) Which is beyond a Party's control,
 - b) Which such Party could not reasonably have provided against before entering into the Contract,
 - c) which, having arisen, such Party could not reasonably have avoided or overcome, and
 - d) which is not substantially attributable to the other Party.

- 19.12 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:
- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
 - b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
 - c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
 - d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
 - e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

- 19.21 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
- 19.22 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.
- 19.23 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3 Duty to Minimize Delay

Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Contract as a result of Force Majeure. A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

19.4 Consequences of Force Majeure

- 19.4.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/ or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in Kenya, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].
- 19.4.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

19.5 Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

19.6 Optional Termination, Payment and Release

19.6.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].

19.6.2 Upon such termination, the Architect shall determine the value of the work done and issue a Payment Certificate which shall include:

- a) the amount payable for any work carried out for which a price is stated in the Contract;
- b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal;
- c) other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
- d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- e) the Cost of repatriation of the Contractor's staff and lab or employed wholly in connection with the Works at the date of termination.

19.7 Release from Performance

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- b) The sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

20. SETTLEMENT OF CLAIMS AND DISPUTES

20.1 Contractor's Claims

- 20.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 20.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.
- 20.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 20.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Architect may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/ or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Architect to inspect all these records and shall (if instructed) submit copies to the Engineer.
- 20.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Architect fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/ or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:
- a) This fully detailed claim shall be considered as interim;
 - b) The Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/ or amount claimed, and such further particulars as the Architect may reasonably require; and
 - c) The Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.
- 20.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Architect and approved by the Contractor, the Architect shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars but shall nevertheless give his response on the principles of the claim within the above defined time period.
- 20.1.7 Within the above defined period of 42 days, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

- 20.18 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.
- 20.19 If the Architect does not respond within the time frame defined in this Clause, either Party may consider that the claim is rejected by the Architect and any of the Parties may refer the dispute for amicable settlement in accordance with Clause 20.3.
- 20.1.10 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/ or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 20.3.

20.2 Procuring Entity's Claims

- 20.2.1 If the Procuring Entity considers itself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Procuring Entity or the Architect shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Procuring Entity's Equipment and Free-Issue Materials], or for other services requested by the Contractor.
- 20.2.2 The notice shall be given as soon as practicable and no longer than 30 days after the Procuring Entity became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.
- 20.2.3 The particulars shall specify the Clause or other basis of the claim and shall include substantiation of the amount and/or extension to which the Procuring Entity considers itself to be entitled in connection with the Contract. The Architect shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Procuring Entity is entitled to be paid by the Contractor, and/ or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].
- 20.2.4 This amount may be included as a deduction in the Contract Price and Payment Certificates. The Procuring Entity shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

20.3 Amicable Settlement

Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 20.1 above should move to commence arbitration after 60 days from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

20.4 Matters that may be referred to arbitration

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:

- a) Whether or not the issue of an instruction by the Architect is empowered by these Conditions.
- b) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- c) Any dispute arising in respect risks arising from matters referred to in Clause 17.3 and Clause 19.
- e) 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 Procuring Entity and the Contractor agree otherwise in writing.

20.5 Arbitration

- 20.5.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.
- 20.5.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute 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.
- 20.5.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.
- 20.5.4 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.
- 20.5.5 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 require mentor notice had been given.
- 20.5.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Architect from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
- 20.5.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.
- 20.5.7 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Architect shall not be altered by reason of any arbitration being conducted during the progress of the Works.
- 20.5.8 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

20.6 Arbitration with National Contractors

20.6.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or 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, on the request of the applying party, 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

20.6.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

20.7 Arbitration with Foreign Contractors

20.7.1 Arbitration with foreign contractors shall be conducted in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules.

20.7.2 The place of arbitration shall be a location specified in the **SCC**; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language].

20.8 Alternative Arbitration Proceedings

Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

20.9 Failure to Comply with Arbitrator's Decision

20.9.1 The award of such Arbitrator shall be final and binding upon the parties.

20.9.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

20.10 Contract operations to continue

Notwithstanding any reference to arbitration herein,

1.1.1 the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

1.1.2 the Procuring Entity shall pay the Contractor any monies due the Contractor.

Section IX - Special Conditions of Contract

The following Special Conditions shall supplement the GCC. Whenever there is a conflict, the provisions here in shall prevail over those in the GCC.

Conditions	Sub - Clause	Data
Procuring Entity's name and address	Heading	MAMA NGINA UNIVERSITY COLLEGE P.O Box 444- 01030, Gatundu
Name and Reference No. of the Contract	Heading and 3.1.1	Proposed Tuition Block Phase (III) at Mama Ngina University College- Gatundu W.P. ITEM NO. D1065 CE/KMB/2502 JOB NO. 11686A
Location of Site		Mama Ngina University College, approximately 49 KM from the Nairobi CBD.
Engineer Name and address	Heading and 3.1.1	Works Secretary, State Department for Public Works, P.O Box 30743 – 00100, Nairobi Telephone: +254-02723101 Facsimile: 020-2713750
Contractor's Representative's Name	4.3.1	To Be Agreed with Engineer
Key Personnel name	16.9.1	To Be Agreed with Engineer
Time for Completion	1.1	52 Weeks
Defects Notification Period	1.1	Immediately
Sections	1.1	None
Electronic Transmission systems	1.3	N / A
Time for Parties entering into a Contract Agreement	1.6	Within 30 days
Commencement Date	8.1.1	To Be Agreed with Engineer
Time for access to the site	2.1	No later than the Commencement Date, and not later than 14 days after Commencement Date.
Architect Duties and Authority	3.1.6 (b) (ii)	Variations resulting in an increase of the Accepted Contract Amount in excess of the contract sum shall require approval of the Procuring Entity.
Performance Security	4.2.1	The performance security will be in the form of a Performance Bond in the amount of 5 Percent of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount
Nominated Supplies to be Engaged by the Client		None
Normal Working Hours	6.5	To be agreed with project manager
Delay Damages for the Works	8.7 & 14.15 (b)	0.01% of the Contract Price per week
Maximum amount of Delay Damages	8.7	5% of the final Contract Price
Provisional Sums	13.5. (b) (ii)	<i>[If there are Provisional Sums, insert a percentage for adjustment of Provisional Sums]</i> --- %
Adjustments for Changes in Cost	13.8	N / A
Total advance payment	14.2.1	0% Percentage of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable

Conditions	Sub - Clause	Data
Repayment amortization rate of advance payment	14.2.5 (b)	N / A
Percentage of Retention	14.3.2 (c)	10%
Limit of Retention Money	14.3.2 (c)	5% of the Accepted Contract Amount
Plant and Materials	14.5(b)(i)	If Sub-Clause 14.5 applies: Plant and Materials for payment Free on Board N / A
	14.5(C)(i)	Plant and Materials for payment when delivered to the Site N / A
Minimum Amount of Interim Payment Certificates	14.6	0% of the Accepted Contract Amount. – AS PER VALUATION
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	annual rate of three percentage points above the mean lending rate of the Central Bank in Kenya of the currency of payment
Maximum total liability of the Contractor to the Procuring Entity	17.6	As per applicable laws
Periods for submission of insurance: a. evidence of insurance. Relevant policies	18.1	14 days 14 days
Amount to be withheld for late submission of an updated Program		Whole Certificate
Maximum amount of deductibles for insurance of the Procuring Entity's risks	18.2.4 (d)	As per applicable laws
Minimum amount of third-party insurance	18.3	As per applicable laws
The Place of Arbitration	20.7.2	To be agreed with the Project Manager

SECTION X - CONTRACT FORMS

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM NO. 2 – REQUEST FOR REVIEW

FORM No. 3-LETTEROF AWARD

FORM No. 4 - CONTRACT AGREEMENT

FORM No. 5 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]

FORM No. 6- PERFORMANCE SECURITY [Option 2– Performance
Bond] FORM No. 7 - ADVANCE PAYMENT SECURITY

FORM No. 8 - RETENTION MONEY SECURITY

FORM No 1: NOTIFICATION OF INTENTION TOAWARD OF CONTRACT

This Notification of Award shall be sent to each Tenderer that submitted a Tender and was not successful. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

FORMAT

1. For the attention of Tenderer's Authorized Representative

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]

2. Date of transmission: *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)* _____

3. Notification of Award

- i) Procuring Entity: *[insert the name of the ProcuringEntity]*
- ii) Project: *[insert name ofproject]*
- iii) Contract title: *[insert the name of thecontract]*
- iv) ITT No: *[insert ITT reference number from ProcurementPlan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender by submitting a Procurement-related Complaint in relation to the decision to award the contracts.

- a) The successful tenderers
 - i) Name of successful Tender _____
 - ii) Address of the successful Tender _____

 - iii) Contract price of the successful Tender Kenya Shillings _____
(in words _____)
- b) The reasons for your tender being unsuccessful are as follows:
- c) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.

SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why Not Evaluated
1				
2				
3				
4				
5				

(Note a) State NE if not evaluated

5. How to request a debriefing

- a) **DEADLINE:** The dead line to request a debriefing expires at midnight on *[insert date]* (local time).
- b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/position]*
 - iii) Agency: *[insert name of Procuring Entity]*
 - iv) Email address: *[insert email address]*
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint

- a) **Period:** Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/ position]*
 - iii) Agency: *[insert name of Procuring Entity]*
 - iv) Email address: *[insert email address]*

- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website www.ppra.go.ke.

You should read these documents before preparing and submitting your complaint.

- e) There are four essential requirements:
 - i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process and is the recipient of a Notification of Intention to Award.
 - ii) The complaint can only challenge the decision to award the contract.
 - iii) You must submit the complaint within the period stated above.
 - iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

- i) **DEADLINE:** The Standstill Period is due to end at midnight on [*insert date*] (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
- iii) The Standstill Period may be extended as stated in paragraph Section 5(d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

FORM FOR REVIEW (r.203(1))

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..... for (Tender description).

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical address.....P. O. Box 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.

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

- 1.
2.

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

FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the day of..... 20.....,
between.....
.....Of..... (hereinafter “the
Procuring
Entity”), of the one part, and _____ of
_____ (hereinafter “the Contractor”), of
the other part:

WHEREAS the Procuring Entity desires that the Works known as _____ should
be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and
completion of these Works and the remedying of any defects there in,

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively
assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this
Agreement. This Agreement shall prevail over all other Contract documents.
 - a) decortication of Award
 - b) the Form of Tender
 - c) the addenda Nos _____ (if any)
 - d) the Special Conditions of Contract
 - e) the General Conditions of Contract;
 - f) the Specifications
 - g) the Drawings; and
 - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as
specified in this Agreement, the Contractor here by covenants with the Procuring Entity to
execute the Works and to remedy defects therein in conformity in all respects with the
provisions of the Contract.
4. The Procuring Entity here by covenants to pay the Contractor in consideration of the execution
and completion of the Works and the remedying of defects there in, 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 where of the parties here to have caused this Agreement to be executed in
accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by _____ (for the Procuring Entity)

Signed and sealed by _____ (for the Contractor).

FORM NO. 5 - PERFORMANCE SECURITY

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: [insert name and Address of Procuring Entity]

Date: _____ [Insert date of issue]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated ____ with (name of Procuring Entity) _____ (the Procuring Entity as the Beneficiary), for the execution of _____ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of ____ (in words),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the.....Day of.....,2.....², and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”
.....

[Name of Authorized Official, signature(s) and seals/stamps]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

FORM No. 6- PERFORMANCE SECURITY

[Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee in stead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:

[insert name and address of Procuring Entity]

Date: _____ *[Insert date of issue]*

PERFORMANCE BOND No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond _____ as Senior Principal (hereinafter called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Obligee (hereinafter called “the Procuring Entity”) in the amount of _____ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____ day of _____, 20_____, for _____ in accordance with the documents, plans, specifications, and amendments there to, which to the extent here in provided for, are by reference made part here of and are here in after referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the default, or shall promptly:
 - a) Complete the Contract in accordance with its terms and conditions; or
 - b) Obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
 - c) Pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions upto a total not exceeding the amount of this Bond.
4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named here in or the

- heirs, executors, administrators, successors, and assigns of the Procuring Entity.
6. In testimony whereof, the Contractor has here unto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly at tested by the signature of his legal representative, this day ____ of ____ 20 ____.

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ [Insert name and Address of

Procuring Entity] **Date:** _____ [Insert date of issue]

ADVANCE PAYMENT GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ (in words _____) is to be made against an advance payment guarantee.
3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (in words _____)¹ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
 - a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
 - b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number _____ at _____.
5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, on the _____ day of _____, 20____, ² _____, ² _____ whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.

²Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee

FORM NO. 8 – RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ [Insert name and Address of Procuring Entity]

Date: _____ [Insert date of issue]

Advance payment guarantee no. [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

1. We have been informed that _____ [insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Contractor") has entered into Contract No. _____ [insert reference number of the contract] dated _____ with the Beneficiary, for the execution of _____ [insert name of contract and brief description of Works] (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys upto the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of [insert the second half of the Retention Money] is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of [insert amount in figures] _____ ([insert amount in words _____])¹ upon receipt by us of the Beneficiary's complying demands supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified there in.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number _____ at _____ [insert name and address of Applicant's bank].
5. This guarantee shall expire no later than the.....Day of.....², and any demand for payment under it must be received by us at the office indicated above on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

²Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request

an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee

FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [insert identification no] Name of the Tender Title/Description: _____ [insert name of the assignment] to: _____ [insert complete name of Procuring Entity]

In response to the requirement in your notification of award dated __ [insert date of notification of award] to furnish additional information on beneficial ownership: [select one option as applicable and delete the options that are not applicable]

1) We here by provide the following beneficial ownership information.

Details of Beneficial ownership

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
1.	Full Name		Directly---	Directly.....	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No----	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes -----No----
	National identity card number or Passport number		----- % of shares	.....% of voting rights		
	Personal Identification Number (where		Indirectly----- % of shares	Indirectly----- % of voting rights		

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
applicable)				2. Is this right held directly or indirectly?:	2. Is this influence or control exercised directly or indirectly?
Nationality				Direct.....	Direct.....
Date of birth [dd/mm/yyyy]				.....
Postal address				Indirect.....	Indirect.....
Residential address				.....
Telephone number					
Email address					
Occupation or profession					
2.	Full Name		Directly--- ----- % of shares	Directly.....% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No----
	National identity card number or Passport number		Indirectly- ----- % of shares	Indirectly----- ----% of voting rights	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes ----No----
	Personal Identification Number (where applicable)				2. Is this influence or control exercised directly or indirectly?
	Nationality(ies)				Direct.....
	Date of birth [dd/mm/yyyy]				
	Postal address				
	Residential				

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
	address					Indirect.....
	Telephone number					
	Email address					
	Occupation or profession					
3. e. t. c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020. (Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company;
or
- (d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer:[insert complete name of the Tenderer]_*

*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: ** [insert complete name of person duly authorized to sign the Tender]*

Designation of the person signing the Tender: [insert complete title of the person signing the Tender]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date this [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp

PART IV- BILLS OF QUANTITIES

PRELIMINARIES

BILL NO. 01 PARTICULAR PRELIMINARIES		
ITEM	DESCRIPTION	KSHS
	<u>PARTICULAR PRELIMINARIES</u>	
A.	<p>EMPLOYER The "Employer" is the MAMA NGINA UNIVERSITY COLLEGE The term "Employer" and "Government" wherever used in the contract document shall be synonymous.</p>	
B.	<p>PROJECT MANAGER The term "PM" wherever used in these Bills of Quantities shall be deemed to imply the project Manager as defined in Condition 1 of the Conditions of Contract or such person or persons as may be duly authorised to represent him on behalf of the Government .</p>	
C.	<p>ARCHITECT The term "Architect" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is MAMA NGINA UNIVERSITY COLLEGE (MNUC), P.O Box 444-01030, GATUNDU.</p>	
D.	<p>QUANTITY SURVEYOR The term "Quantity Surveyor" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing & Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p>	
E.	<p>ELECTRICAL ENGINEER The term "Electrical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing & Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p>	
F.	<p>MECHANICAL ENGINEER The term "Mechanical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing & Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p>	
G.	<p>STRUCTURAL ENGINEER The term "Structural Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing & Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
A.	<p><u>NOTE:-RESPONSIBILITY</u></p> <p>The responsibility for the details designs, specifications and performance of the building is to be done by the design team and shall be approved by the Project Manager before they can be used.</p>	
B.	<p>PRICING ITEMS OF PRELIMINARIES</p> <p>Prices SHALL BE INSERTED against items of “preliminaries” in the tenderer’s priced Bills of Quantities. The contractor is advised to read and understand all preliminary items.</p>	
C.	<p>SCOPE OF CONTRACT</p> <p>The works to be carried out comprises of construction/completion of a Tuition block. The building is to be constructed in reinforced concrete frame with masonry wall and aluminum infills. Other works include electrical works, plumbing & dainage works, external and civil works.</p>	
D.	<p>DESCRIPTION OF THE WORKS</p> <p>The works consists of compeletion of a third floor on existing tuition block consisting of reinforced concrete frame supported by columns and beams. Walls will be in masonry infills and aluminum, metal casement windows, sliding aluminum and metal and wooden doors. Finishes include plaster, render, brick (facing) claddings and painting to plastered surfaces. Services include electrical & ICT works , plumbing &dainage works, fire fighting, mechanical ventillation. Civil works, landscaping and external works as described in the detailed Bills of Quantities .</p>	
E.	<p>MEASUREMENTS</p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 13 of the General Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 13 of the said Conditions.</p>	
F.	<p>LOCATION OF SITE</p> <p>The site of the proposed works is at Mama Ngina University College- Gatundu; approximately 49 KM from Nairobi CBD.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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
<p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p>	<p>SIGNING OF THE TENDER DOCUMENTS</p> <p>The bidder shall append his / her signature and / or company 's rubberstamp on each and every page of tender document.</p> <p>DEMOLITIONS AND ALTERATIONS</p> <p>The Contractor is to allow for all temporary protection required during the works including ordinary and special dust screens, hoardings, barriers, warning signs, etc as directed by the Project Manager and as necessary for the adequate propping and protection of existing property, finishes, workmen employed on the site, employer's agents and the public. Any damage or loss incurred due to the insufficiency of such protection must be made good by the Contractor. All protective devices are to be removed on completion of the works and any necessary making good consequent upon this is to be executed to the satisfaction of the Project Manager</p> <p>The works shall be propped, strutted and supported as necessary before any alteration or demolition work commences. Prices shall include for all cleaning and preparatory work to structure and finishes and for making good to all finishes on completion whether or not specifically described.</p> <p>Unless described as set aside for re-use all arising debris and surplus materials shall be carefully removed from building and carted away from site.</p> <p>The Contractor shall be entirely responsible for any breakage or damage which may occur to materials required for re-use during their removal unless it is certified by the Project Manager that such damage or breakage was inevitable as a result of the condition of the item concerned.</p> <p>CLEARING AWAY</p> <p>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>The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.</p> <p>CLAIMS</p> <p>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 within the contract period. No claim shall be entertained upon the expiry of the said contract period.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
A.	<p>PAYMENTS</p> <p>The tenderer's attention is drawn to the fact that the GOVERNMENT DOES NOT MAKE ADVANCE PAYMENTS but pays for work done and materials delivered to sit: all in accordance with Clause 14 of the General Conditions of Contract Contract. 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 elements</p>	
B.	<p>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</p> <p>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 deemed necessary by taking such care within the site.</p>	
C.	<p>WORKING CONDITIONS</p> <p>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 facility will be operating as usual during the course of the contract.</p>	
D.	<p>SIGNBOARD</p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.</p>	
E.	<p>LABOUR CAMPS</p> <p>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>MATERIALS FROM DEMOLITIONS</p> <p>Any materials arising from demolitions and not re-used shall become the property of the client. The Contractor shall allow in his rates the cost of disposing the demolished materials as directed.</p>	
G.	<p>PRICING RATES</p> <p>The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
A.	<p>SECURITY</p> <p>The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.</p>	
B.	<p>URGENCY OF THE WORKS</p> <p>The Contractor is notified that these “ works are urgent” and should be completed within the period stated in these Particular Preliminaries. 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>	
C.	<p>PAYMENT FOR MATERIALS ON SITE</p> <p>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>	
D.	<p>EXISTING SERVICES</p> <p>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>	
E.	<p>TENDER DOCUMENTS</p> <p>Tender documents are as listed in Clause 6.0 of the Instruction to Tenderers.</p>	
F.	<p>CONTRACT COMPLETION PERIOD</p> <p>The ‘PROJECT MANAGER’ shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary the ‘PROJECT MANAGER’ shall inform the Contractor in writing that his actual performance on site is not satisfactory .In all such cases the Contractor shall accelerate his rate of performance production and progress by all means such as additional labour,plant, e.t.c and working overtime all at his cost.</p>	
G.	<p>PERFORMANCE BOND</p> <p>A bond of 5% of the contract sum will be required in accordance with clause 4, sub clause 4.2 (as amended) and ITT clause 48 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 the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved Bank.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
A.	<p>DELIVERY OF TENDER</p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement. Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.</p>	
	<p>B. VALUE ADDED TAX</p> <p>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 in his rates and prices for prices for VAT and any other Government taxes currently in force.</p> <p>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.</p> <p>NB: The Contractor should therefore include the tax within the rates.</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
	<p>TRANSPORT</p> <p>The contractor shall provide transport from Works Building (State Department for Public Works Headquarters) to Mama Ngina University College at Gatundu site, approximately 50KM from Works Building whenever instructed by the PM for the duration of the contract. The transport shall be in form of a nine (9) seater van (Nissan or equivalent). The vehicle, together with a licenced and competent driver, shall be available to the PM for the duration of the trip until released:</p> <p>The contractor shall ensure that the vehicle is properly licenced, comprehensively insured and in good state of maintenance.</p> <p>The Project Manager may reject an unsatisfactory vehicle or driver and order acceptable replacment.</p> <p><u>Reimbursement for transport shall be as follows:-</u></p> <p>By a rate (1 day) trip for providing a satisfactory vehicle together with a licenced, competent and acceptable driver and his subsistence allowances, adequate fuel for the trip as per tenderer's quoted rates below:-</p> <p>A. Allow for providing a satisfactory vehicle together with a licenced, competent and acceptable driver and his subsistence allowances, adequate fuel for a total of 30 trips @ Ksh.....</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
	<u>PROJECT MANAGERS EXPENSES</u>	
A.	Provide Provisional Sum of Kenya Shillings Two Million Four Hundred Thousand (Kshs. 2,400,000.00) only for Subsistence Allowances for Ministry of Lands, Public Works, Housing & Urban Development (State Department for Public Works) Officers for the duration of the contract period.	2,400,000.00
B.	Allow for Contractor's profit and overheads (-----%)	
C.	Provide Provisional Sum of Kenya Shillings Six Hundred Thousand (Kshs. 600,000.00) only for Training, Stationery and Other Project Expenses for State Department for Public Works Officers.	600,000.00
D.	Allow for Contractor's profit and overheads (-----%)	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
	<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 6 Months From Practical completion</p> <p>Defects Liability Period 180 days from practical completion</p> <p>Date for Possession To be agreed with the Project Manager</p> <p>Date for Completion 52 Weeks.... from date of Possession</p> <p>Liquidated and Ascertained At the rate of ....0.01% of the contract price... per day or part thereof:</p> <p>Prime cost sums for which The Contractor desires to tender</p> <p>Period of Interim Certificates Monthly</p> <p>Period of Honouring Certificates 45 days</p> <p>Percentage of Certified Value Retained 10%</p> <p>Limit of Retention Fund 10%</p>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
	<p style="text-align: center;"><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>Brought forward from page PP/9</p>	
	TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO GRAND SUMMARY	

BILL NO. 02 GENERAL PRELIMINARIES		
ITEM	DESCRIPTION	KSHS
	<p>GENERAL PRELIMINARIES</p> <p>A. PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</p> <p>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</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</p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-</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 by the British Standards Institution, 2 Park Street, London W.I., England.</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	KSHS
<p>A.</p>	<p>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</p> <p><i>Attendance</i> ; Clause B19(a) of the Standard Method of Measurement is deleted and the following clause is substituted</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary;providing space for office accommodation and for storage of plant and materials;providing light and water for their work: clearing away rubbish; unloading checkingand hoisting: providing electric power and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p> <p><i>Fix Only:-</i></p> <p>"Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p>	
<p>B.</p>	<p>FORM OF CONTRACT</p> <p>The Form of Contract shall be as stipulated in the Republic of Kenya's Standard Tender Document for Procurement of Building and Associated Civil Engineering Works (Revised April, 2022 Edition) included herein The Conditions of Contract are also included herein</p> <p><i>Conditions of Contract</i></p> <p>These are numbered from 89 to 147 as set out in pages 89 to 147 of these tender documents.Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities</p>	
<p>C.</p>	<p>PLANT, TOOLS AND VEHICLES</p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>	
	<p><i>Carried to Collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p> <p>TRANSPORT.</p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p> <p>B.</p> <p>MATERIALS AND WORKMANSHIP.</p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p> <p>C.</p> <p>SIGN FOR MATERIALS SUPPLIED.</p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT 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>D.</p> <p>STORAGE OF MATERIALS</p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p> <p>E.</p> <p>SAMPLES</p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT MANAGER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Public Works. The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p>		
	<p><i>Carried to Collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p>	<p>GOVERNMENT ACTS REGARDING WORK, PEOPLE ETC.</p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act I 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>	
<p>B.</p>	<p>SECURITY OF WORKS ETC.</p> <p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
<p>C.</p>	<p>PUBLIC AND PRIVATE ROADS.</p> <p>Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER</p>	
<p>D.</p>	<p>EXISTING PROPERTY.</p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER</p>	
<p>E.</p>	<p>VISIT SITE AND EXAMINE DRAWINGS.</p> <p>The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.</p>	
	<p><i>Carried to Collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p>	<p>ACCESS TO SITE AND TEMPORARY ROADS.</p> <p>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 the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.</p>	
<p>B.</p>	<p>AREA TO BE OCCUPIED BY THE CONTRACTOR</p>	
	<p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER</p>	
<p>C.</p>	<p>OFFICE ETC. FOR THE PROJECT MANAGER</p>	
	<p>The Contractor shall be directed by the Project Manager as soon as the works commences</p>	
<p>D.</p>	<p>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</p>	
	<p>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>	
	<p><i>Carried to Collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p>	<p>SANITATION OF THE WORKS</p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER</p>	
<p>B.</p>	<p>SUPERVISION AND WORKING HOURS</p>	
<p>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.</p>		
<p>C.</p>	<p>PROVISIONAL SUMS.</p>	
<p>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 General Conditions of Contract clause 13.0, sub clause 13.6 of the General Conditions of Contract. Such sums are net and no addition shall be made to them for profit.</p>		
<p>D.</p>	<p>PRIME COST (OR P.C.) SUMS.</p>	
<p>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 GCC clause 5 of the General Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers</p>		
<p>E.</p>	<p>PROGRESS CHART.</p>	
<p>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>		
	<p><i>Carried to Collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p>	<p>ADJUSTMENT OF P.C. SUMS.</p> <p>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 produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. 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>	
<p>C.</p>	<p>NOMINATED SUB-CONTRACTORS</p>	
<p>B.</p>	<p>DIRECT CONTRACTS</p>	
<p>D.</p>	<p>ATTENDANCE UPON OTHER TRADESMEN, ETC.</p>	
<p></p>	<p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts as described in Condition No. 5 of the General 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> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, 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>	
	<p><i>Carried to collection</i></p>	

ITEM	DESCRIPTION	KSHS
<p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p> <p>E.</p>	<p>INSURANCE The Contractor shall insure as required in Conditions No 18 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 Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.</p> <p>BLASTING OPERATIONS 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>PROVISIONAL WORK 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> <p>ALTERATIONS TO BILLS, PRICING, ETC. Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and 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> <p>PROTECTION OF THE WORKS. 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>	
	<i>Carried to collection</i>	

ITEM	DESCRIPTION	KSHS
<p>A.</p> <p>MATERIALS ARISING FROM EXCAVATIONS</p> <p>Materials of any kind obtained from the excavations shall be the property of the Government. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT MANAGER. Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.</p> <p>B.</p> <p>WORKS TO BE DELIVERED UP CLEAN</p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER</p> <p>C.</p> <p>GENERAL SPECIFICATION.</p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p> <p>D.</p> <p>TRAINING LEVY</p> <p>The Contractor's attention is drawn to the legal notice which requires payment by the Contractor of a Training Levy at the rate of 1/4 % of the Contract sum on all contracts of more than Ksh. 1,000,000.00 in value.</p> <p>E.</p> <p>MATERIALS ON SITE</p> <p>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	KSHS
<p>A.</p>	<p>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</p> <p>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>	
	<p><i>Carried to collection</i></p>	

ITEM	DESCRIPTION	KSHS
	<p style="text-align: center;"><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>	
	TOTAL FOR GENERAL PRELIMINARIES CARRIED TO GRAND SUMMARY	

PREAMBLES AND PRICING NOTES

A. GENERALLY

All work to be carried out in accordance with the Ministry of Public Works General Specifications for Building Works issued in 1976 or as qualified or amended below.

B. MANUFACTURERS' NAMES

Where manufacturers' names and catalogue references are given for guidance to quality and standard only. Alternative manufacturer of equal quality will be accepted at the discretion of the Project Manager.

C. WALLING

All precast concrete blocks shall be manufactured by the methods and to the sizes specified in the Ministry of Public Works "Specification for Metric Sized Concrete Blocks for Building (1972)"

Walling of 100 mm thickness or under shall be reinforced with hoop iron every alternate course.

Prices for walling must allow for all costs in preparing, packing and sending sample blocks for testing as and when required by the Project Manager.

D. CARPENTRY

The grading rules for cypress shall be the same for podocarpus and all timber used for structural work shall be select (second grade).

All structural timber must conform to the minimum requirements for moisture content and preservative treatment and timber prices must allow for preparing, packing and sending samples for testing when required.

Prices must also include for all nails and fasteners.

A. JOINERY

Cypress for joinery shall be second grade in accordance with the latest grading rules of the Kenya Government.

Where Mahogany is specified, this refers to prime grade only. The Contractor may with the approval of the Project Manager; use either Msharagi or Mvuli in lieu of Mahogany but such approval will be given only in the case of shortages of the hardwoods specified.

Plugging shall be carried out by drilling walling or concrete with masonry drill and filling with propriety plugs of the correct sizes. Cutting with hammer and chisel will not be allowed.

Prices for joinery must include for pencil rounded arises, protection against damage, nails, screws, framing and bedding in cement mortar as required.

Sizes given for joinery items are nominal sizes and exact dimensions of doors, etc, must be ascertained on site.

B. IRONMONGERY

Ironmongery shall be specified in the Bills of Quantities or equal and approved.

Prices must include for removing and re-fixing during and after painting, labeling all keys, and for fixing to hardwood, softwood, concrete or blockwork.

Catalogue references given for ironmongery are for purposes of indicating quality and size of item(s). Should the Contractor wish to substitute the specified item(s) with others of equal manufacture, he must inform the Project Manager and obtain approval in writing.

C. STRUCTURAL STEELWORK

All structural steelwork shall comply with the Ministry of Public Works "Structural Steelwork Specification (1973) and shall be executed by an approved Sub-contractor.

A. PLASTERWORK AND OTHER FINISHES

All finishings shall be as described in the general specifications and in these Bills of Quantities.

Prices for pavings are to include for brushing concrete clean, wetting and coating with cement and sand grout 1:1.

Rates for glazed wall tiling are to include for a 12 mm cement and sand (1:4) backing screed unless otherwise specified in these Bills of Quantities.

B. GLAZING

Where polished plate glass is specified, this refers to general glazing quality.

Prices for glazing shall include for priming of rebates before placing putty.

The Contractor will be responsible for replacing any broken or scratched glass and handing over in perfect condition.

C. PAINTING

Painting shall be applied in accordance with the manufacturers' instructions.

Prices for painting are to include for scaffolding, preparatory work, priming coats, protection of other works and for cleaning up on completion. Prices for painting on galvanized metal are to include for mordant solution as necessary.

TUITION BLOCK (PHASE III) BUILDERS WORKS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	THIRD FLOOR AND ATTIC WORKS				
	<u>ELEMENT NO. 1</u>				
	<u>REINFORCED CONCRETE SUPERSTRUCTURE</u>				
	<u>Vibrated reinforced concrete grade 25/20 in:-</u>				
A	Beams	92	CM		
B	Columns	30	CM		
C	100mm Thick RC gutter	290	SM		
	<u>High tensile ribbed bars</u> (PROVISIONAL)				
D	8mm diameter	2,011	KG		
E	10mm Ditto	1,562	KG		
F	12mm Ditto	80	KG		
G	16mm Ditto	2,870	KG		
H	20mm Ditto	3,332	KG		
J	25mm Ditto	7,213	KG		
K	32mm Ditto	9,325	KG		
	<u>Formwork</u>				
L	Vertical sides and soffits of beams	756	SM		
M	Vertical sides columns	350	SM		
N	Vertical sides and soffits of gutter	360	SM		
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 2</u>				
	<u>WALLING</u>				
	<u>Machine cut natural stone walling in cement and sand (1:4) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course</u>				
A	200mm thick walling	1,779	SM		
	<u>Interanal Walls (Offices)</u>				
	<u>Powder coated aluminium standard hollow sections; frames mitred at corners including reinforcing cleats all to approval colours (floor to ceiling height- 3450mm)</u>				
B	25 x 50 x 2.5mm thick aluminium hollow sections (horizontal bottom members) screwed to receive glass (m.s).	240	LM		
C	25 x 50 x 2.5mm thick aluminium hollow sections (horizontal members on soffites on suspended concrete slab) screwed to receive clear glass (m.s).	240	LM		
D	25 x 50 x 2mm thick aluminium hollow sections (horizontal middle members screwed to receive clear glass (m.s).	70	LM		
E	25 x 50 x 2.5mm thick aluminum hollow sections (vertical members) screwed to receive frosted glass (m.s).	616	LM		
	<u>Glazing</u>				
F	10mm thick toughened glass wall	168	SM		
	<u>Rubber Gasket/Vinyl glazing strips</u>				
G	10mm thick rubber strips	616	LM		
H	Frosted films with box patterns or any other equal and approved	168	SM		
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 3</u>				
	<u>STEEL ROOF AND ATTIC</u>				
	<u>RC roof slab Finishes</u>				
	<u>25mm thick cement and sand (1:4) screed:-</u>				
A	Laid to falls of suspended roof slab	147	SM		
B	Laid to falls of cantilevered concrete gutter	290	SM		
C	Extra over for throating on soffites of concrete gutter	360	LM		
	<u>Concrete waterproofing admixtures</u>				
D	Prepare and apply chemically approved crystalline admixture and additive to structural engineers specifications	147	SM		
E	Ditto to concrete gutter	290	SM		
	<u>APP Membrane</u>				
F	Prepare and lay two layers of APP; thickness 7mm as per Structural Engineer details.	147	SM		
G	Ditto to concrete gutter	290	SM		
H	APP water based primer	147	SM		
J	Ditto to concrete gutter	290	SM		
	<u>Coping</u>				
K	300 x 50mm thick precast coping stone to parapet walls with 25mm throating/chamfer to both edges and 10mm drip groove on the underside (to architect's approval)	332	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>STEEL ROOF</u>				
	<u>The following welded triangular steel trusses spanning as shown on drawings, height 2500mm including hoisting and placing 12350mm above floor slab level</u>				
A	100 x 50 x 4 mm thick RHS top rafter (8.9kg/m)	3569	KG		
B	100 x 50 x 4 mm thick RHS tie beam (8.9kg/m)	3416	KG		
C	50 x 50 x 4 mm thick SHS intermediate members (5.8kg/m)	5066	KG		
D	50 x 50 x 3 mm thick angle bracings (2.35kg/m)	1276	KG		
E	150 x 50 x 2 mm thick Z purlins (5kg/m)	6200	KG		
F	16mm diameter sag rods	539	KG		
G	Assorted base plate and holding down bolts	1	ITEM		
	<u>IT5 Factory Profile Sheets</u>				
H	28G roofing sheets bolted on Z-purlins (m.s)	1136	SM		
J	Ditto but 570mm Valley piece	25	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Rain Water Harvesting</u>				
	<u>Class C PVC as required</u>				
A	150mm diameter heavy gauge PVC fulbora	12	NO		
B	100mm Diameter down pipe fixed to natural stone walling/olumns with and including brackets 600mm centers.	120	LM		
C	Extra over down pipe for outlet	20	LM		
D	Ditto shoe	10	NO		
	Carried to collection below				
	<u>COLLECTION</u>				
	BROUGHT FORWARD FROM PAGE BW/2				
	BROUGHT FORWARD FROM PAGE BW/3				
	BROUGHT FORWARD FROM ABOVE				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO.4</u>				
	<u>DOORS</u>				
	<u>The following in wrot mahogany or other equal and approved well seasoned HARDWOOD</u>				
A	45mm thick double swing solid core door comprising of six panels with transome in mahogany overall size 1200 x 2100mm high <u>Flush doors to BS 459(part 2)</u>	1	NO.		
B	45 mm single lead semi-solid panel core flush door faced both sides with 6mm mahogany veneered and hardwood lipped all round, including 1350mm high falight overal size 1500 x 3450mm.	1	NO		
C	45 mm single lead semi-solid panel core flush door faced both sides with 6mm mahogany veneered and hardwood lipped all round, including 1350mm high fanlight, overal size 900 x 3450mm .	22	NO		
D	45 mm single lead semi-solid panel core flush door faced both sides with 6mm mahogany veneered and hardwood lipped all round,overal size 900 x 2100mm . <u>Mild Steel</u>	13	NO		
E	50mm thick mild steel double leaf panel doors with 6mm thick clear glass and 1350mm high fanlight, overal size 2000 x 3450mm high	4	NO		
F	50mm thick mild steel double leaf panel doors with 6mm thick clear glass and 1350mm high fanlight, overal size 1500 x 3450mm high	7	NO		
G	50mm thick double leaf louvered steel door, overal size 1300 x 3450mm high (duct door)	3	NO		
H	50mm thick double leaf louvered steel door, overal size 500 x 3450mm high (duct door)	1	NO		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Doors, frames and finishing in wrot mahogany</u>				
A	Frame to detail size, 200 x 50mm , with two labours	225	LM		
B	Frame to detail size, 150 x 50mm , with two labours	50	LM		
C	Architrave to detail size, 40 x 25mm	275	LM		
D	Quadrant bead, diameter 25mm	275	LM		
	<u>Sundries</u>				
E	250 x 25 x 2mm thick L-shaped mild steel fixing cramps with one end split fixed on wall and timber frame <u>supply and fix the following iron mongery with matching screws to timber doors as per"UNION"unless otherwise stated</u>	222	NO		
F	Heavy duty; 125mm brass butt hinges	70	PR		
G	Cylinder high security lock	47	NO		
H	Double cylinder deadlock	3	NO		
J	Wall mounted rubber door stop complete with rawl bolt	63	NO		
K	Slow action door closer as UNION or any equal and approved	17	NO		
	<u>Knot, prime and stop and prepare and apply one undercoat and two finishing coats of clear varnish on:-</u>				
L	General surfaces of wood not exceeding 200-300mm girth	275	LM		
M	General surfaces of wood	307	SM		
	<u>Prepare and apply one undercoat and two finish coats of superior quality oil paint to:-</u>				
N	Surfaces of metals	93	SM		
	<u>Prime only back of frame with aluminium or equal and approved primer before fixing as described to:-</u>				
O	Surfaces of wood not exceeding 200-300mm girth Carried to collection below	275	LM		
	<u>COLLECTION</u>				
	BROUGHT FORWARD FROM PAGE BW/6				
	BROUGHT FORWARD FROM ABOVE				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 5</u>				
	<u>WINDOWS</u>				
A	250 x 25mm Precast concrete window cill bedded and jointed with cement and sand (1:3) mortar	137	LM		
	<u>Supply & fix the following standard mild steel casement windows comprising of standard Z-section framing; size 25 x 25 x 3mm thick complete with aluminium fasteners, stays and all other necessary iron mongery; including burglar proofing primed with one red oxide primer before delivery to the site</u>				
B	Window overal size 5000 x 1250mm high	6	NO		
C	Window overal size 4300 x 1250mm high	1	NO		
D	Window overal size 3000 x 2500mm high	15	NO		
E	Window overal size 2800 x 1250mm high	1	NO		
F	Window overal size 2600 x 1250mm high	1	NO		
G	Window overal size 2000 x 2500mm high	6	NO		
H	Window overal size 1500 x 2500mm high	9	NO		
J	Window overal size 1500 x 1250mm high	8	NO		
K	Window overal size 1300 x 1250mm high	2	NO		
L	Window overal size 1000 x 1250mm high	5	NO		
M	Window overal size 1000 x2500mm high	4	NO		
N	Window overal size 800 x 1250mm high	6	NO		
	<u>Powder coated aluminium standard hollow sections; frames mitred at corners including reinforcing cleats and rubber beading all to approval colours</u>				
O	Sliding aluminum window overal height 600mm	20	SM		
P	Sliding aluminum window /wall overal height 2400mm	58	SM		
	<u>Mild Steel</u>				
Q	25mm diameter mild steel paired curtain rods with Brass coating.	137	LM		
R	Extra over for fixing curtain rod to walls	201	NO		
	<u>Prepare and apply one undercoat and two finishing coats of metal paint (powder coating) on:-</u>				
S	Metal surfaces not exceeding 100mm girth	137	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Painting</u>				
	<u>Touch up primer and apply one undercoat and two finishing coats of 1st quality supergloss paint to:-</u>				
A	General surfaces of windows and burglar bars.	534	SM		
	<u>Glazing</u>				
B	6mm thick clear sheet glass in metal putty panes exceeding 0.1 square metre but not exceeding 0.5 square metre	54	SM		
C	6mm thick light grey tinted sheet glass in metal putty panes exceeding 0.1 square metre but not exceeding 0.5 square metre	225	SM		
	<u>Approved obscure glass</u>				
D	6mm glass and glazing to metal with putty in panes not exceeding 0.1 square meter	33	SM		
	Carried to collection below				
	<u>COLLECTION</u>				
	BROUGHT FORWARD FROM PAGE BW/8				
	BROUGHT FORWARD FROM ABOVE				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 7</u>				
	<u>LABORATORY WORKTOPS</u>				
	<u>Worktop Plinth</u>				
A	100mm thick mass concrete plinth	30	SM		
	<u>Smooth chisel dressed natural stone walling in cement and sand (1:4) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course</u>				
B	150mm thick walling	45	SM		
	<u>Concrete</u>				
C	100mm thick reinforced concrete worktop including 8mm spaced at 150mm centres both ways	30	SM		
D	Extra over for making a hole for lab sink (m.s)	7	NO		
	<u>Formwork</u>				
E	Sawn timber formwork to soffits of suspended worktop slab	30	SM		
	<u>Worktop finishes</u>				
F	20mm thick cement and sand plaster to sides and concrete top	75	SM		
	<u>Epoxy (all Laboratories- sides and worktops))</u>				
G	Prepare floor by shotblasting, prime concrete surfaces and apply chemical resistant top seal and apply 3-5mm thick self leveling epoxy floor to architect's specifications	150	SM		
	<u>Cement and sand (1:4) screeding smooth trowelled</u>				
H	32mm Thick floor to receive terrazzo (m.s)	47	SM		
	<u>Terrazzo</u>				
J	10mm thick well polished coloured terrazzo finish	47	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><u>Laboratory Cabinets</u></p> <p>A Supply and fix 900mm long x 700mm wide x 800mm high, low level worktop (lab) cabinets in 18mm thick white particle board divisions and shelves and drawers, Doors in 18mm thick Armari particle board with 18mm thick x 200mm long horizontal brass or equal and approved handles bolted to board, soft closing hinges and drawers to details and as per attached drawings, fixed to 100mm thick plinth (m.s) and worktop slab.</p> <p>B Supply and fix 800mm long x 700mm wide x 800mm high, low level worktop (lab) cabinets in 18mm thick white particle board divisions and shelves and drawers, Doors in 18mm thick Armari particle board with 18mm thick x 200mm long horizontal brass or equal and approved handles bolted to board, soft closing hinges and drawers to details and as per attached drawings, fixed to 100mm thick plinth (m.s) and worktop slab.</p>	7	NO		
	Total carried to collection				
	<u>COLLECTION</u>				
	BROUGHT FORWARD FROM PAGE BW/11				
	BROUGHT FORWARD FROM ABOVE				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 8</u>				
	<u>FINISHES</u>				
	<u>EXTERNAL FINISHINGS</u>				
	<u>Walls</u>				
	<u>25mm thick cement and sand (1:3) render to:-</u>				
A	Wall externally	333	SM		
	<u>Ruff and Tuff</u>				
B	Prepare surfaces and apply one coat of "ruff n tuff" or any other equal and approved.	1972	SM		
C	Prepare surfaces and apply one coat of "ruff n tuff" or any other equal and approved to soffits and sides of concrete gutter	796	SM		
	<u>Cladding</u>				
	<u>Supply and build thick fire-treated refractory brick walling/cladding bedded and jointed in approved mortar with 6mm thick flush/recessed joints, including all necessary cutting, waste, and cleaning down on completion as per Architect's specifications</u>				
D	230 x 115 x 75mm thick wall cladding	1463	SM		
	<u>INTERNAL FINISHES</u>				
	<u>20mm thick gauged lime (1:2:9) plaster to :</u>				
E	Walls & beams internally	2298	SM		
F	Soffits of suspended attic roof slab	147	SM		
G	Edges of open string approximately 300mm wide	74	LM		
H	Plaster to soffits of landing slabs	5	SM		
J	Slopping soffits of stairs	72	SM		
K	Slopping soffits of ramps	63	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Ceiling</u>				
A	Drop down Decorative gypsum ceiling on approved suspension system comprising 25mm x 20mm galvanised mild steel channels and studs on grid (to Manufacturer's instructions)	1,136	SM		
B	100mm wide curved gypsum cornice	754	LM		
	<u>Prepare and apply three coats first grade Anti bacterial paint (vinylmatt) to:-</u>				
C	Gypsum ceiling	1,136	SM		
D	Walls and beams internally	9192	SM		
E	Soffits of attic suspended roof slab	147	SM		
F	Edges of open string approximately 300mm wide	74	LM		
G	Soffits of landing slabs	5	SM		
H	Slopping soffits of stairs	72	SM		
	<u>Floors</u>				
	<u>Cement and sand (1:4) screeding smooth trowelled</u>				
J	32mm Thick floor screed to receive ceramic floor tiles	1,136	SM		
	<u>Tiles</u>				
	Offices and Classrooms				
K	400 x 400 x 10mm thick high quality ceramic floor tiles bedded and jointed in approved cement adhesive	1,136	SM		
	<u>Wall tiles</u>				
	<u>Cement and sand (1:4) screeding smooth trowelled</u>				
L	12mm thick plaster to receive wall tiles (m.s)	204	SM		
M	250 x 200 x 8mm thick ceramic tiles laid on plastered walls (m.s) and pointed in cement grouting	204	SM		
	<u>Staircases and Ramps Tiles</u>				
N	300 x 1200 x 10mm step tiles	48	SM		
O	200 x 1200 x 10mm riser tile	70	LM		
P	600 x 600 x 10mm thick high quality porcelain tiles to landings and ramp	60	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>COLLECTION</u> BROUGHT FORWARD FROM PAGE BW/13 BROUGHT FORWARD FROM PAGE BW/14				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	AMOUNT
	<u>BUILDERS'WORKS (TUITION BLOCK (PHASE III) SUMMARY</u>	
A	RC SUPERSTRUCTURE FROM PAGE BW/1	
B	THIRD FLOOR WALLING FROM PAGE BW/2	
C	ROOFING FROMAPGE BW/5	
D	DOORS FROM PAGE BW/7	
E	WINDOWS FROM PAGE BW/9	
F	BALUSTRADING AND RAILING FROM PAGE BW/10	
G	LABORATORY WORKTOPS FROM PAGE BW/12	
H	FINISHES FROM PAGE BW/15	
	TOTAL CARRIED TO GRAND SUMMARY	

ELECTRICA AND ICT INSTALLATION WORKS

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
1	Discrepancies clause 3.02	Lot	1		
2	Conditions of contract Agreement clause 3.03	Lot	1		
3	Payments clauses.04	Lot	1		
4	Site location clause 3.06	Lot	1		
5	Scope or Contract Works clause 3.08	Lot	1		
6	Extent of the Contractor's Duties clause	Lot	1		
7	Firm price contract clause 3.12	Lot	1		
8	Variation clause 3,13	Lot	1		
9	Prime cost and provisional sum clause 3.14 (insert profit and attendance which is a percentage of expended PC or provisional sum.)	Lot	1		
10	Bond clause 3.15	Lot	1		
11	Government Legislation and Regulations clause 3.16	Lot	1		
12	Import Duty and Value Added Tax clause 3.17 (Note [his clause applies for materials supplied only)	Lot	1		
13	Insurance company Fees clause 3.18	Lot	1		
14	Provision of services by the Main contractor clause 3.19	Lot	1		
15	Samples and Materials Generally clause	Lot	1		
16	Supplies clause 3.20	Lot	1		
17	Bifls of Quantities clause 3 23	Lot	1		
	SUB TOTAL CARRIED TO PAGE				

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
18	Contractor's Office in Kenya clause 3.24	Lot	1		
19	Builder's Work clause 3.25	Lot	1		
20	Setting to work and Regulating system clause 3.29	Lot	1		
21	Identification of plant components clause 3.30	Lot	1		
22	Working Drawings clause 3.32	Lot	1		
23	Record Drawings As Installed) and Instructions clause 3,33	Lot	1		
24	Maintenance Manual clause 3.34	Lot	1		
25	Hand over dause 3.35	Lot	1		
26	Painting clause 3.36	Lot	1		
27	Testing and Inspection - manufactured plant dause 3,38	Lot	1		
28	Testing and Inspection - Installation clause 3.39	Lot	1		
29	Storage of Materials dause 3.41	Lot	1		
30	Initial Maintenance clause 3.42	Lot	1		
	SUB TOTAL CARRIED TO PAGE				

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
31	Local and other Authorities notices and fees clause 3.GD	Lot	1		
32	Temporary Works clause 3.63	Lot	1		
33	Patent Rights clause 3.54	Lot	1		
34	Mobilization and Demobilization Clause	Lot	1		
35	Supervision by engineer and site meetings clause 3.67	Lot	1	250,000	250,000.00
36	Allow for profit and Attendance for the above (item 35)	Lot	1		
37	Amendment to Scope of Contract Works Clause 3.68	Lot	1		
38	Contractor Obligation and Employers Obligation clause 3.69	Lot	1		
Sub-total from above					
Sub-total B/F from Page 101					
Sub-total B/F from Page 102					
TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE					
<p>Bidders MUST either insert percentage or indicate as NIL for the following clauses:</p> <p>(1) . Attendance upon Tradesmen, etc, [Insert percentage only) clause 3.58 of</p> <p>(2) . Extended Preliminsries (Insert percentage only) Clause 3.66 of section C % per month</p>					

BILL No.2: – Electrical Installations Works

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A	<u>LIGHTING POINTS</u>				
	Supply, install, set to work, test and commission the following items:-				
1	One Way lighting points wired in 3 x 1.5mmsq PVC insulated single core (SC) copper cable drawn in 20mm dia. heavy gauge PVC conduits concealed in concrete slab with all accessories but excluding switch and fitting	No.	112		
2	Ditto as above, for two way lighting points	No.	40		
3	Exit sign light points wired in 3 x 1.5mmsq PVC insulated single core (SC) copper cable drawn in 20mm dia. heavy gauge PVC conduits concealed in concrete slab with all accessories	No.	6		
B	<u>LIGHTING ACCESSORIES</u>				
4	10A,240V moulded switch plates as MK or any other approved equivalent: -				
	i) One gang, one way	No.	28		
	ii) one gang, two way	No.	7		
	iii) Two gang Two way	No.	4		
	iv) Two gang One Way	No.	8		
	ii) Intermediate	No.	1		
5	All lighting fittings to be complete with lamp, control gear etc as applicable.				
	i)1200mm, 4000K,4000Lm, IP66,IK08 and life span;50,000 hours LED moisture proof luminare as Philips or equal and approved equivalent.	No.	16		
	ii)Surface Mounted LED Panel 225mm Dia, 18W, 4000K High Lumen Day white light fitting.as Phillips or equal and approved.	No.	50		
	iii)Surface Mounted LED Panel, 600mmX600mm light fitting:18W, 4000K High Lumen Day white light fitting as Philips or equal and approved equivalent.	No.	64		
	iv) Surface mounted bulkhead with diecast silver aluminium body and opal polycarbonate diffuser. 40watts,IP65, IK10 as philips or equal and approved equivalent.	No.	14		
	v) 13W mirror light complete with 110/240V shaver socket and pull cord as philips or equal and approved equivalent.	No.	8		
	vi) Self-contained single sided EXIT sign with 8W maintained emergency light as philips or equal and approved equivalent.	No.	6		
	Total C/F to next Page				

Brought Forward From Previous Page					
C	POWER POINTS & SOCKETS				
1	Raw power socket outlet power points comprising wiring in 3 x 2.5mm ² PVC/SC CU cables drawn in 25mmØ concealed HG PVC conduits/trunking including all conduit accessories but excluding	No.	120		
2	13A moulded switched socket outlet plates as MKor approved equivalent as follows:				
	i) Twin switched	No.	120		
3	Radial hand drier powerpoint comprising wiring in 3x4mm sq. single core PVC insulated copper cables drawn in 25mm Dia HG PVC conduit complete with all the necessary accessories	No.	4		
4	20A DP switch with Pilot Lamp for item above as MK, or approved equivalent.	No.	4		
5	Radial final circuit for booster pump outlets comprising wiring in 3x6mm sq. single core PVC insulated copper cables drawn in 38mm Dia HG PVC conduit directly from the meter box and complete with all the necessary accessories	No.	1		
6	Radial final circuit for air handling units outlets comprising wiring in 3x4mm sq. single core PVC insulated copper cables drawn in 25mm Dia HG PVC conduit directly from the meter box and complete with all the necessary accessories	No.	1		
7	Cooker circuit wired in 3 x 6sq mm PVC SC copper cables drawn in 38mm HG PVC conduits concealed in the wall and floors complete with all accessories but excluding the cooker control unit	No.	2		
8	45A,cooker control unit	No.	2		
9	Supply and install 200x50mm two(2) compartment powder coated steel trunking manufactured in 14 swg galvanized mild steel sheet and finished in cream powder coating to details shown complete with covers, bends and all fixing accessories. The trunking to be angular section. Allow for colour	Lm	200		
10	Factory made powder coated corner bends for the above trunking.	No.	30		
11	Powder coated twin punched outlet plate for fixing twin socket/data outlets the for above	No.	160		
12	Carry out bonding throughout the entire length of the above trunking and connect to earthing.	Item	1		
	Total C/F to next Page				

BILL No.3: – Solar Installation Works

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
	Supply, install, test commission the following in accordance to IEC, BS and KS standards. The items should be from a reputable company and must be approved before installation. For panels and inverters outside desired brands, bidders must provide sufficient technical information.				
A	<u>PV System</u>				
1	615 Watts Monocrystalline Photovoltaic solar panels as Jinko or approved equivalent as per attached specifications	No.	72		
B	<u>Grid Tie Inverter</u>				
2	50KVA , Three phase grid tie solar inverter as described in particular specifications and as SMA Solar Technology or approved equivalent	No.	1		
C	<u>Combiner Board</u>				
3	6 strings ,Three Phase AC, all weather intelligent Combiner board with rated current working bus bar of 400A complete with 3No. 100A TPN MCCBs as per attached specifications	No.	1		
C	<u>PV connection cables</u>				
4	2x6sqmmd PV cable complete with panel connectors and all necessary wiring accessories for the above solar Panels.The input should comprise of panels connected in 6strings. Each string should comprise of 12 solar panels in series and then the output of the the string should be fed into the	Lm	300		
5	6sqmm earthing PV cable complete with panel connectors and all necessary wiring accessories for the above solar panels	Lm	60		
6	16sqmm PV cable complete with necessary glands and lugs from inverter to combiner board.	Lm	10		
D	<u>AC Cables and Management</u>				
7	4C x 25 mm sq PVC/XLPE/SWA copper cable ss EA complete with glands and shrouds from Combiner board to LV switch board	Lm	10		
E	<u>Earthing</u>				
	Soil resistivity test. Allow to be within standard	Item	1		
	Total C/F to Summary page				

BILL No.4: SUMMARY PAGE

ITEM	DESCRIPTION			AMOUNT
1	Total For Bill No. 1 - General Preliminaries			
2	Total For Bill No. 2 - Electrical Installations			
3	Total For Bill No. 3 - Solar Installation			
4	Contigency sum			500,000.00
Total for Electrical Installations Carried Forward to Grand Summary				

Amount in Works:

Kshs......

Official Stamp &

Address:.....

Tenderer's

Witness' Name:.....**Witness Signature:**.....

Date:.....

SECTION VI

SCHEDULE OF CONTRACT DRAWINGS

SCHEDULE OF CONTRACT DRAWINGS

1.0 There are currently no drawings in this contract.

The drawings shall however be availed, on award of the tender, to the sub-contractor.

SECTION VII

PARTICULAR & TECHNICAL SPECIFICATIONS
OF MATERIALS AND WORKS

PART 1

SPECIFICATIONS OF MATERIALS AND WORKS

1.0 SITE LOCATION

The location of the proposed works is in **Gatundu**

2.0 SCOPE OF WORKS

The works to be carried out under this sub-contract comprise of but not limited to the supply, installation, testing and commissioning of:

- Wiring and Installation of electrical fittings and accessories
- Installation of power distribution boards, cables and switchgear
- Power points and sockets
- Installation of fire detection & alarm system
- Cable trunking, trays and conduiting works
- Solar installation Works

3.0 MATERIALS FOR THE WORKS

Materials shall be as specified in part 2 and in the Bills of Quantities of this document which shall be read in conjunction with contract drawings. Alternative materials shall be accepted only after approval by the Project Manager.

4.0 BROCHURES FOR ALL ELECTRICAL EQUIPMENT AND FITTINGS

For consideration and qualification tenderers shall, at their own cost, provide coloured manufacturer's brochures detailing technical literature and specifications of all the required electrical equipment where applicable.

PART 2

TECHNICAL SPECIFICATIONS OF MATERIALS AND WORKS

1.00 TECHNICAL SPECIFICATIONS FOR LED LIGHT FITTINGS/LAMPS

LED PANEL LIGHT FITTING	
IEC Compliant	
Item	Minimum Specifications
Brand	State the brand, model and attach Technical Brochure (Mandatory)
Operating	<ul style="list-style-type: none">➤ voltage range: 230-240 V ac➤ frequency range: 45-55 Hz➤ Power factor ≥ 0.9 lagging➤ THD $< 15\%$➤ Ambient temperature range -10 to +35 °C Operating➤ Colour Consistency $\leq 5\text{SDCM}$
Performance	<ul style="list-style-type: none">➤ luminous flux = 3400-4000lm➤ System efficacy $> 90\text{lm/W}$➤ Lamp colour temperature : 4000K -6500K➤ Colour Rendering Index > 80➤ Median useful life $\geq 50,000$ hrs➤ Luminaire light beam spread - 120°
Standards Compliance	CB/EMC/CE
General	<ul style="list-style-type: none">➤ Driver/power unit/transformer - PSU-E➤ Optical cover/lens type - Polystyrene bowl/cover prismatic➤ Protection class IEC - Safety class II (II)

2.00: TECHNICAL SPECIFICATIONS FOR FIRE ALARM SYSTEM

SECTION A:

1.0 SYSTEM DESIGN

1.1 The Code of Practice for design, installation and servicing

This specification is for the design and installation of fire detector alarm systems for general applications and is based on BS5839 Part 1: 1988.

1.2 Property Protection

A satisfactory fire alarm system for the protection of property will automatically detect a fire at an early stage, indicate its location and raise an effective in time to summon the fire fighting forces (both resident staff and fire brigade).

The general attendance time of the fire brigade should be less than 10 minutes. Therefore an automatic direct link to the fire brigade is essential.

1.3 Life Protection

A satisfactory fire alarm system for the protection of life can be relied upon to sound a fire alarm while sufficient time remains for the occupants to escape.

2.0 ZONE DETAILS

2.1 Zoning of the system

To ensure a fast and unambiguous identification of the fire source, the protected area should be divided into zones.

When determining the area to be covered by a zone, consideration should be given to accessibility, size, the fire routine determined for the premises, and particularly in occupied premises, that each zone is accessible from the main circulation routes leading from the where the control panel is sited.

In general the following guide lines for the size of a zone should be observed:

1. If the total area (i.e. the total of the floor areas of each storey) of the building is not greater than 300m² then the building need only be one zone, no matter how many floors it has.
2. The total floor area for a zone should not exceed 2000m².
3. The search distance should not exceed 30m. This means the distance that has to be travelled by a searcher inside a zone to determine visually the position of a fire should not exceed 30m. The use of remote indicator lamps outside doors may reduce the number of zones required.
4. Where stairwells or similar structures extend beyond one floor but are in one fire compartment, the stairwell should be a separate zone.
5. If the zone covers more than one fire compartment, then the zone boundaries should follow compartment boundaries.
6. If the building is split into several occupancies, no zone should be split between two occupancies.

Notes:

1. A fire compartment is an area bordered by a fire resisting structure usually at least 30 minutes resistance.
2. Zone limits can be relaxed only in certain manually operated systems.
3. It may be an advantage to have manual call points on separate zones to detectors. This will avoid misleading information regarding the position of fire, particularly on staircase landings.
4. Removal of a detector from a zone circuit must not isolate a break glass call point on the same circuit.

3.0 ADDRESSABLE SYSTEMS

In an addressable system several zones may be connected to the control panel by a single loop circuit.

Maximum area covered by one loop is 10,000 sq m.

In addressable systems the detector or manual call point in alarm can be shown by the use of an alpha numeric display. This on its own will not be acceptable and the zone in which the detector/manual call point has operated must be displayed.

The zonal indication may be mounted adjacent to the control panel, and the plan of the building/floor should also be displayed. This means, the use of mimic diagram would seem to be the most suitable means for zone identification.

However in small systems where the identification of location of an incident by an individual device is not confusing, then zonal information may not be required.

4.0 BREAK GLASS AND MANUAL CALL POINTS

The break glass call point is a device to enable personnel to raise the alarm in the event of a fire, by simply breaking a frangible element and thus activating the alarm.

The following guidelines should be observed for the correct siting and positioning of break glass call points:

1. Break glass call points should be located on exit routes and in particular on the floor landings of staircases and at all exits to the open air.
2. Break glass call points should be located so that no person need travel more than 30m from any position within the premises in order to give an alarm.
3. Generally, call points should be fixed at a height of 1.4m above the floor, at easily accessible, well-illuminated and conspicuous positions free from obstruction.
4. The method of operation of all call points in an installation should be identical unless there is a special reason for differentiation.
5. Manual and automatic devices may be installed on the same system although it may be advisable to install the manual call points on separate zones for speed of identification.

5.0 ALARM SOUNDERS

An important component of any fire alarm system is the alarm sounder, normally a bell or electronic sounder, which must be audible throughout the building in order to alert and/or evacuate the occupants of the building.

The following guidelines should be observed for the correct use of alarm sounders:

1. A minimum sound level of either 65dBA or 5Dba above any background noise likely to persist for a period longer than 30 seconds, whichever is greater should be produced by the sounders at any occupiable point in the building.
2. If the alarm system is to be used in premises such as hotels, boarding houses etc., where it is required to wake sleeping persons then the sound level should be 75dBA minimum at the bedhead.
3. All audible warning devices used in the same system should have a similar sound and be distinct from any other audible alarms used for other purposes. Except in noisy areas where high performance sounders may be required.
4. A large number of quieter sounders rather than a few very loud sounders may be preferable to prevent noise levels in some areas from becoming too loud.
5. It is unlikely that sounder noise levels in a room will be satisfactory if more than one dividing wall or door separates it from the nearest sounders.
6. The level of sound provided should not be so high as to cause permanent damage to hearing
7. The number of fire alarm sounders used inside a building should be sufficient to produce the sound level recommended, but should in any case be at least two.

5.1 Other requirements include:

1. The sounders should be arranged on at least two separate circuits, so that the failure of one circuit does not cause all sounders in the building to fail.
2. Frequency range between 500 – 1000Hz.
3. Most single doors will cause a 20db drop in sound level. Fire doors – 30db.
4. Where mains sounders are being used to supplement 24V DC sounders, the 240V AC supply should be monitored.
5. To achieve 75db at the bedhead, a sounder should be installed in the bedroom.

6.0 SELECTION OF EQUIPMENT DETECTION TYPES

When choosing the type of detector to be used in a particular area it is important to remember that the detector has to discriminate between fire and the normal environment existing within the building, i.e. smoking in hotel bedrooms, fumes from forklift trucks in warehouses, steam from bathrooms, kitchens etc.

6.1 Heat detectors

Heat detectors may be the Point type (which responds to temperatures surrounding one particular spot), or the Line type (which responds to temperature change along its line).

All Point type heat detectors should include a fixed temperature element operating at a pre-determined temperature. Some may also include a rate-of-rise element designed to operate in response to a rapid rise in temperature. Heat detectors are in general less sensitive than other types of detector and should therefore not be used where a small fire will cause unacceptable losses.

6.2 Smoke detectors

There are two principal methods of smoke detection: the ionisation chamber, and the optical scatter chamber. The detection method chosen will usually depend on the type of risk to be protected against. In the ionisation chamber, an electric current flows between two electrodes and is reduced by smoke. Ionisation detectors are particularly sensitive to small particle smoke such as that produced in rapidly burning fires but are relatively insensitive to large particle smoke such as that produced by overheated PVC or smouldering polyurethane foam. In the optical chamber, light is scattered, or in some cases absorbed by smoke.

Optical detectors are more sensitive to large particles found in optically dense smoke, but are less sensitive to the small particle smoke.

Today, optical smoke detectors are more widely used than ionisation types due to the growing use of flame retardant materials in building construction, decoration and furnishings. Careful consideration must be given to any specific risks that might occur.

6.3 Siting and spacing of detectors

In a building the greatest concentration of smoke and heat will generally collect at the highest parts of the enclosed areas and it is here therefore, that detectors should normally be sited. Heat detectors should be sited so that the heat sensitive element is not less than 25mm, nor more than 150mm, below the ceiling or roof. If a protected space has a pitched or north light roof, then smoke detectors should be installed in each apex. The following parameters should be followed when spacing detectors:

The maximum horizontal distance between any point in the area and the nearest detector:

1. Under flat horizontal ceilings and corridors more than 5m wide

- i) For Point type Heat Detectors 5.3m (maximum area 50m²)
- ii) For Point type Smoke Detectors 7.5m (maximum area 100m²)

Heat Detectors

Max area of coverage per detector = 50m²

Max distance covered = 5.3m (for square layout this is 3.5m to wall 7m between detectors)

Smoke Detectors

Max area of coverage = 100m²

Max distance covered – 7.5m (for a square layout this is 5m to wall, 10m spacing)

2. In a corridor less than 5m wide (where adjoining rooms are protected by automatic detection)

ADD to the maximum horizontal distance 50% of the difference between 5m and the actual width of the corridor.

e.g.: In a 2m wide corridor, the difference between: 2m and 5m = 3m
50% of 3m = 1.5m

Maximum distance of travel for a Point type Smoke Detector = 7.5m + 1.5m = 9m

3. In the apex of a pitched or north light roof

A row of detectors should be sited in the apex. One row of detectors should be sited at the highest point, a minimum distance of 0.5m from the vertical wall.

ADD to the maximum horizontal distance 1% for each degree of slope up to a maximum increase of 25%

e.g.: A Point type detector at the apex of a 20 degree slope.
20% of 7.5m = 1.5m
Maximum distance of travel 9m

The maximum area of coverage may also be increased proportionally

4. Obstructions

- (i) Where the passage of smoke or hot gas from a position to a detector is likely to be disturbed by a ceiling obstruction (such as a beam) having a depth greater than 150mm, but less than 10% of the height of the ceiling, then the horizontal distance should be decreased by twice the depth of the obstruction.

e.g.: For a point type smoke detector obstructed by a beam of 200mm depth Maximum distance of travel

$$= 0.2 \times 2 = 0.4\text{m}$$

$$7.5\text{m} - 0.4\text{m} = 7.1\text{m}$$

- (ii) Where a ceiling obstruction, such as a beam, is greater than 10% of the height of the ceiling then the areas either side of the obstruction should be considered as separate rooms.

- (iii) Ceiling beams less than 150mm can be ignored.

5. Detectors (Other than beam type)

Detectors should not be mounted less than 500mm from any walls or partitions. Where rooms are divided into sections by walls, partitions or storage racks reaching within 300mm of the ceiling, the dividers should be considered as if they reach the ceiling.

7.0 LIMITS OF CEILING HEIGHT

Detectors should not normally be mounted on ceilings higher than the general limits on Table 1 below. If small sections of a ceiling (not exceeding in total 10% of the ceiling area) exceed in height the general limits of the table, those higher sections may be protected by Point type heat detectors provided that the ceiling height in the higher sections does not exceed 10.5m, or by Point type smoke detectors provided that the ceiling height in the higher sections does not exceed 12.5m

Note: Generally the beam should not pass closer to the wall or partition than 500mm, and not closer to an obstruction than 500mm. However, up to 3m of the beam may be closer than this.

8.0 CEILING HEIGHT LIMITS WITH RAPID ATTENDANCE

Although an increased ceiling height means that the fire will be larger when it is detected, the size of the fire when fire fighting starts will also depend on the delay between detection and the start of fire fighting. If this delay is small, then the increase in fire size at detection due to a higher ceiling can be acceptable.

If the detection system is automatically connected to the fire brigade either directly or via a central (fire alarm) station and the usual attendance time of the fire brigade is not more than 5 minutes, then the rapid attendance limits of ceiling height given in the table in the top right may be applied. If small sections of a ceiling (not exceeding in total 10% of the ceiling area) exceed in height the limits of the table in the top right, those higher sections may be protected by Point type heat detectors if their height does not exceed 18 metres.

9.0 CONTROL EQUIPMENT

The control and indicating panel will depend on the size of the protected building and the extent of the automatic protection provided.

Specification of equipment would be based on numbers of zone circuits, sounder circuit, battery standby, remote center link ancillary control relays, and other individual customer requirements.

Next to the control unit should be a diagrammatic plan showing zone locations.

Siting of control and indication equipment

1. In an area of low fire risk
2. On the ground floor by entrance used by the fire brigade.
3. In an area common to all building users.
4. Where automatic detectors are in use, the control equipment area must be protected.
5. Alarm sounder must be sited next to the control unit.

10.0 STANDBY POWER SUPPLIES

Standby supplies will usually be from secondary batteries with automatic chargers. These batteries must have an expected life of at least 4 years and the code specifically bans the use of automotive type batteries.

When the mains supply fails the standby must be able to operate the alarm load for 30 minutes after a certain minimum duration. The minimum duration varies with the type of system and building occupancy.

For life protection (L) if a mains failure will be recognized within 12 hours, a standby duration of 24 hours is required. If the 12-hour requirement is not likely to be met, a standby of 24 hours after the detection of the fault is required.

For property protection (P) if the mains failure will immediately be recognized then a 24 hours standby is required, if not, then the required duration is 24 hours longer than the building may remain unoccupied

11.0 WIRING

The satisfactory operation of a fire alarm system depends on the interconnection of its components. Some interconnections may have to function correctly for significant periods after being attacked by fire, e.g: cables to power supplies, control equipment and sounders.

Other cables must function when a trigger device operates, but are not needed after an alarm has been raised, e.g: cables to manual call points, smoke detectors and heat detectors.

Cables can therefore be classed in two groups:

1. Cables permissible if operation is not required during fire, e.g: Cables to manual call points, smoke and heat detectors.
2. Cables permissible if operation is required during a fire, e.g: Cables to power supplies, control equipment and alarm sounders.

While mineral insulated cables are preferable for fire alarm applications, the following cables can be used for the two groups:

Group 1

1. MICC to BS 6207: Part 1 with or without PVC sheath.
2. Cables complying with BS 6387 at least in categories AWX or SWX or A or S.
3. PVC – insulated to BS 6004 sheathed or non-sheathed with mechanical protection.
4. Rubber insulated to BS 5007
5. PVC single type BK, BR and BU to BS 6231.
6. PVC insulated SWA to BS 6346
7. Cross-linked polyethylene or hard ethylene-propylene rubber insulated SWA
8. to BS 5467
9. Polyethylene insulated PVC sheathed coaxial cable to the dimensional requirements of BS 2316: Part 3 but with a minimum of 16-strands/0.2mm diameter central conductor.

1. Cables designed for the detection of heat.

Group 2

Cables 1 & 2 in Group 1 may be used for Group 2 applications. All the other cables shown above may also be used provided that they are protected either by burying them within a wall and covering them with 12mm of plaster or equivalent, or protecting them from a significant fire risk by shielding them with a wall, partition or floor having a minimum demonstrate 0.5 hour fire resistance.

These requirements may in certain cases be reduced when included in areas of low risk or when covered by an automatic extinguishing system.

Certain cables may also need mechanical protection against impact, abrasion or rodent attack. As a guide, cables 1, 6 and 7 above will not need further protection but all others may in risk circumstances. BS5839 Part 1 gives full details.

Other types of cables can be used provided that their suitability can be clearly demonstrated.

Conductors carrying fire alarm power or signals should be separated from conductors used for other systems.

12.0 INSTALLATION OF CABLES

Cables should be installed in accordance with the good practices recommended in the latest edition of the IEE wiring regulations.

Connection to a mains supply should be via an isolating switch fuse reserved solely for the purpose. Its cover must be painted red and labelled fire alarm – do not switch off.

Conductor size should take voltage drop into account. In any case conductors should have a cross-sectional area of not less than 1 square mm or, if stranded, of not less than 0.5 square mm.

Where possible, cables should be routed through areas of low fire risk.

Cables installed in damp, corrosive or underground locations should be PVC sheathed. Where there is a risk of mechanical damage, cables should be protected accordingly.

Cables in cavities or voids should be separated from other cables by 300mm, unless enclosed in a conduit, ducting or trunking.

Screened cables complying to be BS 7629 can be run in duct or tray without segregation

13.0 ROUTINE TESTING OF SYSTEM

The system should be regularly tested and serviced. BS5839 Part 1 makes the following recommendations:

Daily

- (i) Check that the panel indicates normal operation. If not, record any fault indicated in the event log and report the fault to a responsible person.
- (ii) Check that any fault recorded for the previous day has received attention

Weekly

- (i) Operate a manual call point or smoke detector to ensure the system operates properly. Each week a different detector should be checked.
- (ii) Check that the sounders have operated and then reset the system
- (iii) Check the battery connections.
- (iv) Complete the event log with details of date, time, trigger device tested and enter “Routine Weekly Test” the “Action Required” and reported to a responsible person

Quarterly

- (i) Check entries in the log book and take any necessary action. (ii) Examine the batteries and their connections.
- (iii) Operate a manual call point or smoke detector to ensure the system operates properly, checking that all sounders are operating.
- (iv) Check that all functions of the alarm control panel operate by simulating fault conditions.
- (v) Visually check that structural alterations have not been made that could have an effect on the siting of detectors and other trigger devices.
- (vi) Complete the event log with details of date, time, trigger device tested and "Quarterly Test" in the event sections. Any defects or alterations to equipment should also be entered.

Annually

- (i) Carry out an inspection as detailed for the quarterly inspection. (ii) Every detector should be tested in situ.
- (iii) All cable fittings and equipment should be checked to ensure that they are secure and undamaged

SECTION B:

14.0 ANALOGUE ADDRESSABLE FIRE DETECTION SYSTEMS

Analogue Addressable Systems provide combined enhanced detection sensitivity and reduced false alarm potential to create a safer, trouble-free detection environment.

Analogue addressable systems should achieve levels of fire detection and protector which embrace the virtues of fast and accurate response and high levels of detection sensitivity with a significantly reduced false alarm potential.

The addressable system to meet the following:-

- The requirements of BS. EN54 Pt. 2 and 4: 1998
- Installer-friendly 'plug in' feature
- 2km maximum loop length
- Up to 120 devices per loop.
- Other Required Features:-
- Programmable sounder circuits direct from control panel.
- Capability to add manual sounder circuits, via loop alarm interface units.
- Sounders wired directly on to the detector loop
- Large capacity high intensity LCD-8 lines, with 40 characters per line
- Capacity for repeater panels on loop

- Facilities for on-site programming
- Password protected user and service menus
- Networking facility
- Dirty detector fault warning facility
- Day/night sensitivity adjustment capability
- Coincidence detection
- Pre-alarm facility
- Power supply remote option

14.1 Network Capability

The loop control panels should be capable of being interconnected easily to produce larger systems.

When a fire or fault condition is detected on any of the control units an event message is passed to all the other panels connected to the system. It should be possible to interconnect fire detection systems on larger sites to form a single-site network.

Within information from individual panels, available across the network, an overall fire plan, involving alerting or evacuating affected parts of the site can be implemented.

When a fire or fault condition is detected on any of the control units, an event message is passed on to all other panels connected to the system. Each panel will then display event information such as panel number, loop, zone/sector and address data. Alarm line operation across the network can be facilitated using zone and sector numbering.

Alarm sounder options

Alarm sounders can be connected to the system as follows:

(i) On dedicated alarm lines, wired directly from the control panel. Four and eight separate alarm outputs to be provided in the two and four loop control panels respectively.

Each alarm circuit to be separately programmable to activate from any designated zone or zones of devices on the detection loop.

(ii) Additional alarm lines to be connected to the system via alarm line interface units. Each unit to provide four programmable alarm line outputs and be capable of being positioned anywhere on the detection loop wiring.

(iii) Where loop-wired sounders are used, these should be connected directly on the detector loop wiring. These units to be programmed either to sound a general alarm or be individually operated by a signal from any designated zone or zones of detection devices-hence offering a complete analogue addressable system on a single pair of wires.

Electronic sounders to give sound outputs complying with the requirements of BS5839 Pt 1: 1998. The sounders to be capable of giving various sound types.

14.2 Additional programmable features

The following additional features to be programmed into the system:

- address to zone number allocation (up to 128 zones)
- address to device type (e.g. detector or call point)
- zone, address, device type and sector text (24 characters each)
- zone or sector intermittent alarm pattern allocation
- 2 stage alarm timer
- zone or sector to auxiliary relay timed operation. Further relays may be added by using remote relay interface units.
- auxiliary input operation (e.g. silence/sound/evacuate etc)
- 40 characters of site text displayed by the panel in normal state, with the time and date.
- customer fire or fault programming
- double knock/coincidence
- day/night sensitivity
- adjustable detector threshold levels

15.0 SYSTEM FEATURES

Styled for the buildings of tomorrow

Information relating to the status of the system to be clearly indicated via the panel's alphanumeric 8 line, high intensity liquid crystal display.

15.1 1, 2 or 4 Loop options

The panels to be capable of being connected to either 1, 2 or 4 detector loops each loop being up to 2 km in length and 4 or 8 programmable sounder circuits, respectively.

Additionally, the panels to be capable of being networked together to provide even higher levels of detection and alarm system capacity. When networked, each panel to be configured to provide information relating to the entire fire detection system, thus enhancing the level of building safety.

15.2 Operation

Access level one controls to be positioned on the front of the panel, for ease of operation. Level two controls are to be concealed behind a key operated cover, and once exposed, they should enable the operator to interrogate the system's memory to obtain information on the location, status and progress of any fire incident.

Further levels of control, for example the disablement of, and reinstatement of detectors and zones, to be available via a security access code.

The system's memory to be capable of recording historical information relating to the minimum, maximum and current analogue levels received from any address, providing the facility for the constant monitoring of detector condition and a record of 'normal' fluctuations in the environment at each location, for simplification of routine testing and maintenance procedures.

15.3 Installation

Each panel to be supplied with address modules 1-60 for each loop. These are to be inserted into each appropriately numbered detector or call point on the system. Address modules 61-120 to be supplied separately to cater for systems with more than 60 addressable devices per loop.

15.4 Standard

The system to comply with BS EN54 Pt 2 1998 – Control and Indicating Equipment (CIE) and BS EN54 Pt 4 1998 – Power Supply Equipment (PSE)

16.0 SYSTEM OPERATION

16.1 Operational characteristics

The following is a brief summary of the main functions and the expected operational characteristics of the system.

Adjustable pre and full alarm facilities

Adjustable pre and full alarm thresholds to be set for individual detector addresses.

Once a pre-alarm threshold has been reached, a signal to be sent to designated locations, alerting those responsible for system monitoring, that the potential for a fire incident may exist. When the full alarm threshold is reached, the system to automatically provide warning signals to pre-determined areas of the system, for purposes of facilitating orderly evacuation of those areas affected.

A day/night operation facility to be provided to give a desensitized level of detection during the day and full sensitivity during night time operation, without affecting immediate alarms from manual call points.

Automatic detector fault facility

High and low- level fault thresholds to be indicated. If a device's analogue level drifts, over a period of time from its normal background value, a fault indication to be given at the panel, showing the address of the detector. The detector can then be inspected and serviced or replaced if necessary. This facility to be included to increase building safety through simplification of routine maintenance, and testing.

Line extensions

Alarm and relay extension lines to be connected at any address on the analogue detection loop, using the appropriate interface.

Repeater facility

The dedicated repeater panel to be either connected to the detection loop, or spurred directly from a panel, if preferred. The Repeater Unit to be supplied with an 80 character LCD and integral power supply unit.

Enhanced detector addressing

Each system to be programmed to provide an address/detector indication for each device, which enables a 'DEVICE TYPE ERROR' indication to be displayed at the control panel in the event of a wrong device being fitted.

□ PC control colour graphics and data acquisition facility

This add-on package, to feature a PC and monitor, complete with software and the origination of up to 12 site plans. Additional plans can be added as extras.

SECTION C: ANALOGUE ADDRESSABLE DETECTORS

17.0 ANALOGUE DETECTORS

The analogue photoelectric smoke detector is ideally suited to the detection of slow burning fires. It employs an infra-red light source and photodiode to provide early warning of a hazard. Smoke particles entering the detection chamber cause light scatter, which is detected by the photodiode. The detector to be resistant to false alarms caused by dust, insects, high humidity and draughts.

17.1 Analogue Ionization Smoke Detector

Particularly suitable for identifying clean burning fires. The detector to incorporate twin sampling chambers which provide enhanced stability and inhibit the potential for false alarms caused by changing environmental conditions.

Analogue Heat Detector to be capable of being configured by the control panel to operate either as a fast response, medium response heat detector, or a high temperature detector.

Common Mounting Base to be compatible with detectors (both analogue and conventional). The base to incorporate a secure locking tab and position indicator, facilitating the correct orientation of the detector for optimum viewing of the detector's LED.

18.0 ANALOGUE REPEATER PANELS Analogue Addressable Repeater Panel

The repeater unit to incorporate a 2 x 40 character liquid crystal display, with the optional facility of an integral printer. Additional features to include own log, to receive and store information from the main panel, and an output to facilitate the addition of a mimic repeater panel. The standard unit to be surface or flush mounted.

Slimline Mimic Diagram (SMD)

The slimline machine is designed to augment the information provided by main or repeat panel.

The SMD helps to maximize alarm flexibility, whilst reducing system wiring to an absolute minimum.

The module is installed either as a sounder detector base or as a stand-alone wall or ceiling mounted unit. Either option is accommodated directly on the two wire detector loop.

The fully programmable SMD to allow alarm organization on a single sounder, zonal or general alarm basis.

The self-powered facility to allow up to 120 detection devices and up to 55 addressable sounders to be connected on to the loop wiring.

The SMD to have selectable tones, continuous intermittent or warble. To be used in systems designed to BS5839 Pt 1. The sound output to be rated at 93 dB.

Addressable Sounder

The loop wired addressable sounder is to be used with analogue addressable fire systems. Installed either in conjunction with a detector or on a standalone basis, the sounder is addressed and powered directly from the detector loop.

The unit to provide a sound level of 85 dBA, and offer continuous intermittent or warble sound types, all within the recommended BS5839 Pt 1 frequency.

Each analogue loop to have a maximum of 30 units.

19.0 LOOP INTERFACE UNITS

To help provide input/output signals from anywhere on the loop wiring. This device to enable automatic operation of building plant in the event of a fire or the interface with existing fire detection or fire extinguishing systems to be easily incorporated.

Alarm/power supply interface units to allow additional alarm lines to be wired from any loop location. Each unit to provide the facility for using four independent programmable alarm circuits (1A maximum per alarm line, 3A maximum load). Alarm lines to be controlled without the need to wire directly back to the panel.

Relay/power supply interface unit to provide four additional programmable relay contacts (5A, 30 VDC) to enable output signals for operating external equipment.

This unit to have a dedicated 240VAC supply and should be capable of being connected at any address location on the detection loops.

Interface units, loop maximums. A maximum of 3 alarm interfaces and 4 relay interfaces may be connected to each loop controller, with each loop controller controlling two loops.

As a two loop panel contains a single loop controller, a maximum of 3 alarm line interfaces and 4 relay interfaces may be connected to loops 1 and 2 or a combination of both. A four loop panel contains 2 loop controllers enabling a maximum of 3 alarm interfaces to be connected to either loop 1 or 2 with a similar number on either loop 3 or 4.

Short circuit isolator provides protection of the detection loop. This ensures that the remainder of the loop protected by the short circuit isolator arrangement continues to function should a fault occur.

Standard interface unit enables a spur, containing a maximum of 5 standard detectors, and an unlimited number of conventional call points to be connected to the detection loop. UP to 10 interface units may be connected to a loop. Conventional call points should be wired before conventional detectors on any spur circuit. They should not be mixed.

Input/Output interface unit provides both input and output signals directly on to the loop. Input signals from other fire protection systems can be displayed at the control panel. Output signals can be provided in order to operate plant shut down or door release equipment.

20.0 ADDRESSABLE BREAK GLASS CALL POINTS

The call point is addressed in a similar manner to the addressable detector bases, using the same set of address modules. There is no restriction on the number that may be used on a loop, up to a maximum of 120 address points. An LED indicator is incorporated as standard to confirm that the unit has operated.

Weatherproof break glass call point

21.0 MINIMUM TECHNICAL SPECIFICATIONS FOR SOLAR PV MODULES

Tender specifications for Solar PV Modules			
TECHNICAL SPECIFICATIONS			
Item	Minimum Specifications	Proposed Solution	Remarks
Brand	State the brand, model and attach Technical Brochure (Mandatory)		
	Maximum Power (Pmax): 615 WP Maximum Power Voltage (Vmp): 45.69V Maximum Power Current (Imp): 13.46A Open-circuit Voltage (Voc): 55.40V Short-circuit Current (Isc): 14.18A Module Efficiency STC (%): 22% Maximum system voltage :1000/1500VDC Maximum series fuse rating: 30 A Cell Type: N-type Mono-crystalline Module type: Tier 1 Mono-Facial Module		

22.0 MINIMUM TECHNICAL SPECIFICATIONS FOR THREE PHASE GRID-TIED INVERTER

Tender specifications for Grid tied inverter			
TECHNICAL SPECIFICATIONS			
Item	Minimum Specifications	Proposed Solution	Remarks
Brand	State the brand, model and attach Technical Brochure (Mandatory)		
	Inverter type: 3-Phase Grid-Tied Solar Inverter Topology: Transformerless Protection Degree: IP 66 Input Max. Input Voltage: 1,100 Vdc Max. Current per MPPT: 30 A Max. Current per Input: 20 A Max. Short Circuit Current per MPPT: 40 A MPPT Operating Voltage Range: 200V- 1,000V Rated Input Voltage: 600 V Number of inputs: 8 Number of MPP Trackers: 4		

Tender specifications for Grid tied inverter

TECHNICAL SPECIFICATIONS			
Item	Minimum Specifications	Proposed Solution	Remarks
Brand	State the brand, model and attach Technical Brochure (Mandatory)		
	<p>Output Rated AC Active Power: 50,k W Max. AC Active Power: 55,kW Rated Output Voltage: 400 Vac 3-phase (L/N/PE) Rated AC Grid Frequency: 50 Hz / 60 Hz Adjustable Power Factor Range :<3% Efficiency: 98.5% Communication: WLAN, Fast Ethernet, 4G Display: LED Indicators, WLAN + APP Smart Dongle: 4G / 3G / 2G Optimizer Compatible</p> <p>Protection Input-side Disconnection Device Anti-islanding Protection AC Overcurrent Protection DC Reverse-polarity Protection PV-array String Fault Monitoring DC Surge Arrester AC Surge Arrester DC Insulation Resistance Detection Residual Current Monitoring Unit Arc Fault Protection Ripple Receiver Control Integrated PID Recovery</p>		

23.0 MINIMUM TECHNICAL SPECIFICATIONS FOR THREE PHASE COMBINER PANEL

Tender specifications for three phase combiner panel			
TECHNICAL SPECIFICATIONS			
Item	Minimum Specifications	Proposed Solution	Remarks
Brand	State the brand, model and attach Technical Brochure (Mandatory)		
	<p>Grid Topology: TN-S(5- Conductor system:L1,L2,L3,PE,N) Material: Powder coating Material Dimension:180cmx80cmx40cm Rated Voltage: 230/400V Protection Degree: IP 65,IK10 Rated Insulation Voltage:690V Frequency:50Hz/60Hz Operating temperature:-25 degrees Celsius to +60degrees Celsius <u>Ac Input</u> Number of inverters: 4 Ac Breaker:160A Rated Current per Input: up to 160A <u>Ac Output</u> Number: one per phase Ac Breaker:630A Rated Current per output: up to 160A</p>		

SECTION VII
TECHNICAL SCHEDULE
OF
ITEMS TO BE SUPPLIED

TECHNICAL SCHEDULE

- 1.0 The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders
- 2.0 The filling of this schedule forms part of Technical Evaluation of the tenders, and bidders shall therefore be required to indicate the type/make and country of origin of all the materials and equipment they intend to offer to the employer as listed in the technical schedule.
- 3.0 **Any bid returned with unfilled Technical Schedule shall be considered technically non-responsive, and the bidder shall automatically be disqualified.**

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED
(To be Completed by the Tenderer as a Mandatory Requirement)

ITEM	DESCRIPTION	TYPE/MAKE	COUNTRY OF ORIGIN
1	1200mm,LED moisture proof luminaire		
2	600x600mm,LED Luminaire		
3	13A,Twin Socket		
4	200mm dia,LED Luminaire		
5	Smoke and Heat Detectors		
6	Addressable fire alarm repeater panel		
7	Distribution Board and MCBs		

Detailed manufacturer's Brochures detailing Technical Literature and specifications on the above items **MUST** be attached and Items to be supplied highlighted (Model and Make).

MINISTRY OF LANDS, PUBLIC WORKS HOUSING & URBAN DEVELOPMENT

**STATE DEPARTMENT FOR PUBLIC WORKS
ELECTRICAL DEPARTMENT**

TESTING AND COMMISSIONING OF ELECTRICAL INSTALLATION WORKS ON SITE.

PROJECT NAME:

W.P. NO. JOB NO.....

PROJECT SITE.....

CLIENT.....

The Sub contractor shall test in accordance with the relevant section of IEE regulations, Rule 3 of the Electrical Power Act for additional tests not covered by the regulations, Government Electrical specifications I & II and the Kenya Power & Lighting Co. Ltd by-laws.

A PRELIMINARY CHECKS

The Engineer shall check to establish the following data:-

ITEM	DESCRIPTION		REMARKS
(i)	Type of installation (New/Renovation/Addition/ to existing installation)		
(ii)	a) Power supply 240V/415V/11KV		.....
	b) Frequency of the mains supply		.....
	c) Installation power factor		.....
(iii)	Method of Metering (New /Monitoring/Existing meter)		
(iv)	Are Testing/Measuring instruments available		
(v)	Are there maintenance/operational manuals for specialized systems (if any)		
(vi)	List of 'As installed drawings'	Drg No.	Description

B TESTS

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS
1	Tests shall be carried out to ensure:		
	a) All fuses and single pole switches are installed in live conductor		
	b) All outlets and switched socket outlets are connected to 'LIVE' conductor in the Terminal marked so and each earth pin effectively bonded to earth continuity system		
	c) Verify continuity of all final conductors of each 'Ring' circuit. (0.05 to 0.8Ω)	.....Ohms	
	d) All radial circuits emanate from respective distribution boards/consumer units and that they do not supply any other Equipment		
	e) The correct phase sequence is maintained throughout the installation		
	f) Effective 'Discrimination' in the arrangement of protective devices. i.e. a fault in the furthest power point/Lighting point should not blow or trip Fuses/MCBs respective in the Meter board.		
2	Inspect to ensure:		
	a) No terminal in the Ceiling Rose is 'LIVE' when the corresponding switch is in the off position.		
	b) All conduit termination conduit boxes, Consumer unit, DB's and Adaptable boxes have smooth edges and are properly bushed.		
	c) All fixed metal works close to Electrical installation are bonded to earth continuity conductor.		
	d) All Fuse ways and Circuit breakers for final sub circuits are properly labeled		

B TESTS CONT'D

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS	
3	Carry out the following tests:			
	a) Insulation Resistance tests <ul style="list-style-type: none"> i) Between phases <ul style="list-style-type: none"> a) R -Y .....MΩ b) R -B .....MΩ c) B-Y .....MΩ ii) Phase to Neutral <ul style="list-style-type: none"> a) R - N .....MΩ b) Y - N .....MΩ c) B - N .....MΩ iii) Phase to Earth <ul style="list-style-type: none"> a) R - E .....MΩ b) Y -E .....MΩ c) B -E .....MΩ <p>Minimum thresholds for above and for:</p> <ul style="list-style-type: none"> i) ELV circuits (SELV & PELV) = 0.25 MΩ ii) LV Circuits up to 500V = 0.5 MΩ iii) LV Circuits above 500V = 1 MΩ 			
	b) Earth continuity conductor impedance (0.005 to 2Ω)	.....Ohms	
	c) Earth fault Loop impedance (0 - 2000 Ω)	.....Ohms	
	d) Earth Electrode resistance (Less than 4Ω)	.....Ohms	
	e) Earth Lead resistance (Less than 4Ω)	.....Ohms	
	f) The operation of protection MCCBS & MCBS (Tripping under faulty conditions)			
	g) Check the mechanical toggling (make & break) of all the switches to installed accessories.			
	4	Underground cabling, Check for:		
		i) Continuity of the phases		
ii) Factory tests done (avail certification)				
iii) Proper termination				
iv) Route markers				

B TESTS CONT'D

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS																					
5	Installed load																							
	i) Lighting points (No.)																							
	ii) Socket outlets (No.)																							
	iii) Motors (Give rating)																							
	iv) Other machines (Attach list if more)																							
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Item</th> <th style="width:40%;">Description</th> <th style="width:10%;">Rating</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Item	Description	Rating																				
	Item	Description	Rating																					
6	Type of Earthing: TN-C/TN-S/ TN-C-S/TT/IT.																							
7	LV switchboard: The board shall be checked to ascertain the following																							
	i) Rating of the switchboard																							
	ii) Rating of main incomer MCCB																							
	iii) Form of construction (1/2B/3B/4)																							
	iv) Degree of protection (IP rating)																							
	v) Nameplates for identification of all circuits entering/leaving switchgear																							
	vi) Proper Electrical & Mechanical operation of functional parts i.e MCCBs, Indicating meters, CTs & VTs .																							
	vii) Check cable terminations, type & terminals viii) General comments on the appearance of the finished mechanical assembly including welding, full nuts & tightness of bolted parts.																							
8	Fireman's switch.																							
	i) Make and manufacturer																							
	ii) The rating of the switch																							
	iii) Test for the Electrical and Mechanical operation of the switch																							
	iv) State the types of loads supported by the maintained board on the switch.																							
	** see foot note																							

ICT INSTALLATION WORKS

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
1	Discrepancies clause 3.02	Lot	1		
2	Conditions of contract Agreement clause 3.03	Lot	1		
3	Payments clauses.04	Lot	1		
4	Site location clause 3.06	Lot	1		
5	Scope or Contract Works clause 3.08	Lot	1		
6	Extent of the Contractor's Duties clause	Lot	1		
7	Firm price contract clause 3.12	Lot	1		
8	Variation clause 3,13	Lot	1		
9	Prime cost and provisional sum clause 3.14 (insert profit and attendance which is a percentage of expended PC or provisional sum.)	Lot	1		
10	Bond clause 3.15	Lot	1		
11	Government Legislation and Regulations clause 3.16	Lot	1		
12	Import Duty and Value Added Tax clause 3.17 (Note [his clause applies for materials supplied only)	Lot	1		
13	Insurance company Fees clause 3.18	Lot	1		
14	Provision of services by the Main contractor clause 3.19	Lot	1		
15	Samples and Materials Generally clause	Lot	1		
16	Supplies clause 3.20	Lot	1		
17	Bifls of Quantities clause 3 23	Lot	1		
	SUB TOTAL CARRIED TO PAGE				

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
18	Contractor's Office in Kenya clause 3.24	Lot	1		
19	Builder's Work clause 3.25	Lot	1		
20	Setting to work and Regulating system clause 3.29	Lot	1		
21	Identification of plant components clause 3.30	Lot	1		
22	Working Drawings clause 3.32	Lot	1		
23	Record Drawings As Installed) and Instructions clause 3,33	Lot	1		
24	Maintenance Manual clause 3.34	Lot	1		
25	Hand over dause 3.35	Lot	1		
26	Painting clause 3.36	Lot	1		
27	Testing and Inspection - manufactured plant dause 3,38	Lot	1		
28	Testing and Inspection - Installation clause 3.39	Lot	1		
29	Storage of Materials dause 3.41	Lot	1		
30	Initial Maintenance clause 3.42	Lot	1		
	SUB TOTAL CARRIED TO PAGE				

BILL 1.0 - CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
31	Local and other Authorities notices and fees clause 3.GD	Lot	1		
32	Temporary Works clause 3.63	Lot	1		
33	Patent Rights clause 3.54	Lot	1		
34	Mobilization and Demobilization Clause	Lot	1		
35	Supervision by engineer and site meetings clause 3.67	Lot	1	250,000	250,000.00
36	Allow for profit and Attendance for the above (item 35)	Lot	1		
37	Amendment to Scope of Contract Works Clause 3.68	Lot	1		
38	Contractor Obligation and Employers Obligation clause 3.69	Lot	1		
Sub-total from above					
Sub-total B/F from Page 101					
Sub-total B/F from Page 102					
TOTAL CARRIED FORWARD TO MAIN SUMMARY PAGE					
<p>Bidders MUST either insert percentage or indicate as NIL for the following clauses:</p> <p>(1) . Attendance upon Tradesmen, etc, [Insert percentage only) clause 3.58 of</p> <p>(2) . Extended Preliminsries (Insert percentage only) Clause 3.66 of section C % per month</p>					

BILL No.4: CCTV SURVEILLANCE SYSTEM

Supply, install, set to work, test and commission the following as specified and					
<u>CCTV SURVEILLANCE SYSTEM</u>					
1	Vandal proof dome cover IP digital camera as per Particular specification (State make and type, and enclose catalogues)	No.	18		
2	Vandal proof Bullet IP digital camera as per Particular specification (State make and type, and enclose catalogues)	No.	8		
3	PTZ IP digital camera as per Particular specification (State make and type, and enclose catalogues)	No.	8		
4	Network Video Recording System as per Particular specification (State make and type, and enclose catalogues)	No.	1		
5	48TB Surveillance SATA HDD Suitable for NVR above	No.	2		
7	Client Base Station -19inch rack mount RAID 5, H.265, MPEG 4 compression, minimum 1080p support, 2x USB 2.0 port, 2xGigabit LAN, 1TB memory, Remote access,CCTV keyboard support, Manual or automatic back-up, Minimum 8GB	No.	1		
8	Power supply 12V DC Switch mode 3Amps	No.	1		
9	Power Distribution Units (PDU) 6/8 way Surge Protected /Triplite Voltage Regulator	No.	1		
10	IP Video Management System/Software as per technical specifications.	No.	1		
11	24 Port Edge Switch as Described in the particular specifications	No.	2		
12	24port patch panel as per Particular specifications	No.	2		
13	UTP Cat 6A cables as Siemons or approved equivalent	Lm	3400		
14	240V, 50Hz 1000VA,APC smart un interrupted power supply unit (UPS) with USB and Serial Port or an approved equivalent	No.	1		
15	UTP Cat. 6A patch cord as per Particular specifications	No.	34		
16	72inch LED FHD screens as Lgor approved equivalent.	No.	1		
17	2U Cable Manager/Organizers as Siemon or its equal and approved equivalent.	No.	2		
18	Mini trunking PVC (provisional length)	Lm	100		
Total for Bill No.4:CCTV Surveillance C/F to Summary Page					

BILL No.7: SUMMARY PAGE

ITEM	DESCRIPTION			AMOUNT
1	Total For Bill No. 1 - General Preliminaries			
2	Total For Bill No. 2 -Structured cabling works			
3	Total For Bill No. 3 - Internet Protocol Private Exchange (IP-PBX)			
4	Total For Bill No. 4 -CCTV Surveillance			
5	Contigency sum			500,000
	Grand Total for ICT Installation Works Carried to Grand Summary			

Amount in Works:

.....

Official Stamp &

.....

Tenderer's

Signature:.....**Date:**.....

.....

Witness' Name:.....**Witness Signature:**.....

Date:.....

SECTION VI

SCHEDULE OF CONTRACT DRAWINGS

SCHEDULE OF CONTRACT DRAWINGS

1.0 There are currently no drawings in this contract.

The drawings shall however be availed, on award of the tender, to the sub-contractor.

SECTION VII
PARTICULAR & TECHNICAL SPECIFICATIONS
OF MATERIALS AND WORKS

PART 1

PARTICULAR SPECIFICATIONS OF MATERIALS AND WORKS

1.0 SITE LOCATION

The location of the proposed works is in **Gatundu**

2.0 SCOPE OF WORKS

The works to be carried out under this sub-contract comprise of but not limited to the supply, installation, testing and commissioning of:

- LAN and data cabling terminations
- Optical fiber and terminations
- Equipment racks and cabinets
- Access points
- IP Telephone instruments
- CCTV System Installation Works
- Edge Switches
- Patch Panel and Patch cords
- Telephone Equipment

3.0 MATERIALS FOR THE WORKS

Materials shall be as specified in part 2 and in the Bills of Quantities of this document which shall be read in conjunction with contract drawings. Alternative materials shall be accepted only after approval by the Project Manager.

4.0 BROCHURES FOR ALL TELECOMMUNICATION EQUIPMENT AND FITTINGS

For consideration and qualification tenderers shall, at their own cost, provide coloured manufacturer's brochures detailing technical literature and specifications of all the required telecommunication equipment where applicable.

PART 2

2.00 TECHNICAL SPECIFICATIONS FOR STRUCTURED CABLING SYSTEM CABLING & IP CCTV SURVEILLANCE SYSTEM

2.01 EXTENT OF WORKS FOR IP CCTV SURVEILLANCE SYSTEM

The security surveillance system should consider the following.

IP CCTV Camera. The specified cameras should be able to cover the distance with clear pictures. Consider whether there shall be need to support the fixed digital cameras with the Pan, Tilt and Zoom Cameras or not. Highly sensitive areas should be covered with more cameras able to take pictures of any person coming in both from the front and the rear. The resolution of the cameras should be able to give motion pictures that are clear.

LED Monitors. The color monitors must be of high resolution and preferably of plasma screen. The size of the monitor should be big enough to allow the operators make correct deductions both in real time operation and during playbacks.

IP Network Video Recording. The recording multiplexer resolution must be equally high for the monitor to display the with a high resolution.

The IP Surveillance system should be able to support the following:

- IP based recording system with motion detection
- Digital zooming into recorded images/ live view
- Multi-level password protection and logging facilities
- Image compression for remote web live and playback viewing in case of IP.
- Multi Display monitors
- Automatic daily archiving to hard drive or optical drive
- Fully adjustable digital video motion detection with exclusion/ inclusion multi regions per camera
- Efficient video collection, storage and retrieval
- Advanced and instant search capabilities
- Digitally signed recordings, with audit trails of all operator actions and system event
- Storage capacity of the Network Video Recorder. Space to provide at least three months continuous recording and backup for automatic archiving for one year and redundancy.
- Infrared illuminators in poor lighting conditions
- Able to interface with other systems on the ground
- Support IP and PoE connectivity

2.02 WORKING DRAWINGS

The Contractor shall submit to the Project Manager working drawings for the proposed system for approval. The drawings will show the locations for all IP cameras, cable routing and terminations, telecommunication outlets/ connectors, location of NVR, monitors and Edge switches.

2.03 MINIMUM REQUIREMENTS FOR THE PROPOSED IP CCTV SYSTEM

The cameras shall have the following minimum specifications but cameras with higher specifications shall be accepted:

A) IP Dome Camera

- 4 Mega Pixel Full HD IP Dome Camera with Infrared
- Built in Infrared 30 meters
- Minimum imaging sensor
- Wide Dynamic Range 120db
- Motorized Varifocal Auto Iris lens (3-11mm)
Minimum illumination 0.01lux (colour)
- IP network capable
- PoE capability
- H.265+ video compression
- 3D Noise reduction
- Accessible edge storage with internal MicroSD card slot
- Local Storage
- True day and night vision capability
- I/O - 1 Alarm in / 1 Alarm out
- 2 Way Audio
- Tampering detection, Face detection, Audio Detection, Motion detection & Privacy Masking and event triggered alarm processing
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- ONVIF Compliant

(State make and type and enclose brochures/ catalogues)

B) IP Bullet Camera

- 4 Mega Pixel Full HD IP Bullet Camera with Infrared
- Built in Infrared 60 meters
- Minimum imaging sensor
- Wide Dynamic Range 150db
- Motorized Varifocal Auto Iris lens (3-11mm)
Minimum illumination : 0.002 Lux (Color)
- IP network capable
- PoE capability
- H.265+ video compression
- 3D Noise reduction
- Accessible edge storage with internal MicroSD card slot
- Local Storage
- True day and night vision capability
- I/O - 1 Alarm in / 1 Alarm out
- 2 Way Audio
- Tampering detection, Face detection, Audio Detection, Motion detection & Privacy Masking and event triggered alarm processing
- Vandal proof IK-10 rating housing
- Weather proof IP67 rating
- ONVIF Compliant

(State make and type and enclose brochures/ catalogues)

C) PTZ Dome Camera

- 2MP Full HD PTZ dome Camera with Infrared
 - Built in Infrared: 150meters
 - Imaging sensor: 1/2.8" Progressive Scan CMOS
 - Digital Wide Dynamic Range (DWDR) support
 - Motorized Varifocal Auto Iris lens (4-94mm, 20x)
Minimum illumination : Color : 0.02 Lux, BW;0.002Lux, 0Lux with IR
 - IP network capable
 - PoE capability
 - 3D Intelligent positioning Function
 - 3D Noise reduction
 - Accessible edge storage with internal MicroSD card slot
 - 360° endless pan range and -15°-90° tilt range
 - True day and night vision capability
 - H.264/ MJPEG video compression
 - 2 Way Audio (1 audio input and 1 audio output)
 - Tampering detection, Face detection, Audio Detection, Motion detection & Privacy Masking and event triggered alarm processing
 - Vandal proof IK-10 rating housing
 - Weather proof IP66 rating
 - ONVIF Compliant

2.04 MOUNTING BRACKETS

The Brackets shall:

- Be suitable for wall or ceiling mounting of a single camera. Be at least 5.5"length
- Have an auto lock facility

2.05 CAMERA HOUSING

The camera housing shall:

- Be IP66 rated with integral cable management.
- Be Weatherproof and constructed from aluminium with epoxy coating.

2.06 LED DISPLAY SCREEN

The monitor should be capable of providing high levels of picture quality 10MHz bars Visible at low brightness and reliability stable synchronization, black level clamping, low sensitivity and high stability.

The monitors shall be high performance color video monitors for monitoring scenes from the above cameras and viewing playback scenes from the video cassette recorders. The monitors shall be located at places to be shown on site by the project manager.

The monitor shall give stable and interference free pictures of scenes being viewed. It shall also conform to the following specifications:

DESCRIPTION	MINIMUM SPECIFICATIONS
Display	<ul style="list-style-type: none"> ➤ Technology - LED ➤ Display Type – UHD ➤ Screen Size – 72" ➤ Resolution – 4K or higher ➤ Contrast Ratio - 5000:1 ➤ Aspect Ratio - 16:9 4:3
Video (Picture Quality)	<ul style="list-style-type: none"> ➤ HDR - 4K Active HDR ➤ Dynamic Tone Mapping - HDR Dynamic Tone Mapping ➤ Upscaler - 4K Upscaler ➤ Noise Reduction - NR ➤ HEVC (Video Decoder) - 4K@60P, 10bit ➤ VP9 (Video Decoder) - 4K@60P, 10bit ➤ Picture Mode - Yes 9 modes (Vivid, Standard, Eco, Cinema, Sports, Game, HDR Effect, (ISF) Expert (Bright Room), (ISF) Expert (Dark Room))
Audio	<ul style="list-style-type: none"> ➤ Two built in stereo speakers
Built In Audio Decoders	<ul style="list-style-type: none"> ➤ BBE Digital, Virtual Dolby Surround Sound
Digital Comb Filter:	<ul style="list-style-type: none"> ➤ With Digital comb filter
Digital cable:	<ul style="list-style-type: none"> ➤ Digital Cable Ready
Progressive Scan	<ul style="list-style-type: none"> ➤ With Progressive Scan
Supported HD Broadcast	<ul style="list-style-type: none"> ➤ 720 P, 576 P, 1080i, 480 P, 576i
Formats	<ul style="list-style-type: none"> ➤ PAL, SECAM, NTSC
DTV Capability	<ul style="list-style-type: none"> ➤ Ready
Picture-in-Picture (PIP):	<ul style="list-style-type: none"> ➤ With (PIP)
Inputs supported:	<ul style="list-style-type: none"> ➤ Component, Composite Video, VGA, DVI, HDMI (3), USB, Stereo Audio
Outputs Supported:	<ul style="list-style-type: none"> ➤ Component, VGA, DVI, HDMI, Stereo Audio
Physical Characteristic	<ul style="list-style-type: none"> ➤ Wall mountable

(State make and type, and enclose catalogues)

2.07 NETWORK VIDEO RECORDER

The network video recorder shall have the following minimum requirements:

- 48 Channels
- Recording speeds of at least 400Mbps for 48 channel
- Gigabit Ethernet connection
- Multi-screen Display: Full/4/9/16 way or as appropriate.
- 2 SATA interfaces for HDD connection (up to 10TB capacity per HDD)
- support capability VGA/HDMI local monitor
- Redundant hot swap power supply
- Network management/viewer software
- In built intelligent video analysis H.265+
- Compression

- ONVIF compatibility
- Web viewer supported
- PoE enabled
- Storage capacity : continuous storage for at least six (6) months and back up storage for at least one year
- Smart Video Search Feature for streamlined Investigations
- Recording resolution of 5MP minimum
- IP address filtering, user access log, authentication and encryption
- Auto Launch of Video on specified Alarms/Events
- LED status indicator
- CE,UL certification

(State make and type, and enclose catalogues)

2.08 CCTV MANAGEMENT SOFTWARE

CCTV management software with the following minimum specifications:-

- Event Recording Scheme
- Operate Motion-Dector-Recording
- NTSC-PAL video recording.
- Be capable of recording real time images at full resolution and frames rate.
- Features for connection for alarm system Automatic Recycling
- Users' passwords.
- Input, Output, Audio Alert Facilities
- Remote Viewing Facilities, TCP/IP, INTERNET, ISDN, modem
- Capability of streaming into client's existing LAN/ WAN infrastructure
- Ability to quickly search through thousands of hours of recorded video information
- Event-triggered video recording to reduce storage requirements
- Masks out disturbing areas, or areas of no interest, within the specified region
- Identifies & immediately alerts user to potential security breaches
- Features should be able to be used at very low frame rates
- Easy calibration for specific applications
- Color-matching matches user-specified colour to the video image
- Functions in outside environments with changing light conditions:
- Auto-learning of background feature
- Object saliency and object Consistency mechanisms to filter out phantom objects
- "Out of focus" condition is user-calibrated by level of Focus
- Automatic self-test of camera validity
- Motion Trajectory Analyzer provides advanced analysis of the motion of objects
- Seamless integration into Enterprise security knowledge management solution.
- Analysis of stationary objects

(State make and type, and enclose catalogues)

2.09 CABLING

- a) All cables must pass through conduits or trunking.
- b) All cables and connectors shall be labeled.
- c) No distortion due to kinks, sharp bends or excessive hauling tension shall be allowed.
- d) Cables shall be run in a manner eliminating any possibility of strain on the cable itself or on the terminations.
- e) Cables shall have no joints or splices.
- f) Cables shall be kept at a minimum distance of 150mm from items liable to become hot or cold.
- g) Bending radii shall be not less than eight times the overall cable diameter.
- h) The manufacturers hauling tension shall not be exceeded.

- i) All cable ties and fixings shall be tightened to support the cable loom without distortion of the cable sheath.
- j) The UTP 4 pair shall be of cat 6A grade and exceed ANSI/TIA/EIA-568-Aj and ISO/IEC 11001 standards. Cat 6A structured cabling shall be used throughout the entire installation.

2.10 HORIZONTAL CABLING

a)	Category 6A UTP 4-Pair Cable	Proposed Solution
Item	Minimum specifications	
Length	Reel in a box 305m	
Brand	State the brand, model and attach Technical Brochure (Mandatory)	
Construction	<ul style="list-style-type: none"> • UTP • Nominal jacket OD: 8.5mm (0.33 in.) • 0.58mm (0.02 in.) solid (non-tinned) copper • Centre Isolation Member 	
Jacket	8.5mm with Sequential meter markings	
Wire characteristics	DC Resistance: <8.5 O/100m DC Resistance Unbalance: 2% Mutual Capacitance: 5.6 nF/100m Capacitance Unbalance:<160 pF/100m Characteristic Impedance(ohms):1 - 250 MHz: 100 ± 15% 100 - 750 MHz: 100 ± 22% NVP: 67% TCL: 30-10 log (f/100)dB PSANEXT: 62.5-15log(f /100)dB PSAACR-F:38.2-20log(f /100)dB Delay Skew: = 45ns	
Industry Compliance	<ul style="list-style-type: none"> • ISO/IEC 11801 Ed. 2.2 (Class EA) • ISO/IEC 61156-5 (Category 6A) • TIA-568-C.2 (Category 6A) • LSOH: ISO/IEC 60332, IEC 60754, IEC 61034 • EN50399 Class Eca 	
Physical Properties	Pulling Tension (max):110N (25 lbf) Bend Radius (min): 45.7mm (1.8 in.) Installation Temperature: 0 to 60°C (+32 to 140°F) Storage Temperature: -20 to 75°C (-4 to 167°F) Operating Temperature: -20 to 60°C (-4 to 140°F)	
Warranty	End-to-End Manufacturer's Warranty on Cabling System (Attach Manufacturer's Warranty Statement) Minimum 15 Years Warranty	

(State make and type, and enclose catalogues)

b) PATCH CORDS: Category 6A double-ended, stranded modular cord 1/2/3/5 Meter

Item	Floor Distribution In Cabinet and user work-station areas	Proposed Solution
	Minimum specifications	
Length	1 , 3 & 5 meters	
Brand	State the brand, model and attach Technical Brochure (Mandatory)	
Construction	MECHANICAL — PLUG Number of Plug Insertion Cycles: 2500 Min. Plug Retention Force: 50N (11.2 lbf)	
Jacket	Factory made	
Wire characteristics	MECHANICAL — CABLE (STRANDED) Wire Size Range (Nominal): 26 AWG 7x32 Stranded tinned copper Cable Construction: UTP dual jacketed Cable O.D. (nominal) 7.37mm (0.29 in.) outer, 6.43mm (0.25 in.) inner Wiring:T568A/B Jacket Type: CMG Bend Radius: 25mm (1.0 in.) 4-pair cables with 100-ohm impedance. Compliant to standards such as TIA/EIA – 268-B. 2-1 and IEC 61156-Made of polyethylene insulation Pulling force should support up to 50N/mm2 Low Smoke Zero Halogen outer sheath. MECHANICAL — CABLE (SOLID)	
Wire characteristics	Wire Size Range (Nominal): 23 AWG Solid bare copper Cable Construction: UTP Cable O.D. (nominal): 7.87mm (0.31 in.) Wiring: T568A/T568B Jacket Type: LSOH Bend Radius: 25mm (1.0 in.)	

Performance Specifications	<p>ELECTRICAL Contact Resistance - 10 mΩ Input to Output Resistance - 200 mΩ Min. Dielectric Withstand Voltage (contact to contact) - 1000 V DC or AC peak Insulation Resistance - 500 mΩ Compatibility Backwards tCat 6 Current Rating @ 25° C - 1.5 A Power over Ethernet - Suitable for PoE Type1,2,3,4 and PoH Power over Ethernet < 10 mΩ/m @ 10 MHz</p> <p>MECHANICAL — GENERAL Operating Temperature - -10 to 60° C, (14 to 140° F) Flammability Rating - UL 94 V-0 Green Features RoHS, lead-free, halogen-free, PVC free Plug Housing Materials - Polycarbonate Contact Materials -50 microinches gold plating or equivalent Plastic Materials - Flame retardant thermoplastic Screen 360 degree enclosure Marking - P/N, length, performance level, QC</p>	
Standards	<p>STANDARDS COMPLIANCE</p> <ul style="list-style-type: none"> • ANSI/TIA-568.2-D • ISO/IEC 11801-1 Ed 1.0 • IEEE 802.3an (10Gbase-T) • IEEE 802.3af (Type 1 PoE) • IEEE 802.3at (Type 2 PoE) • IEEE 802.3bt (Type 3 PoE) • IEEE 802.3bt (Type 4 PoE) • Power over HDBaseT (PoH) • IEC 60603-7, • IEC 60603-7-4, • UL Listed 1863 • IEC 60332-1 (LSOH), • IEC 60754 (LSOH) • IEC 61034 (LSOH), • ANSI/TIA-1096-A 	
Warranty	<p>End-to-End Manufacturer's Warranty on Cabling System(Attach Manufacturer's Warranty Statement) Minimum 15 Years</p>	

c) PATCH PANELS

- a) Shall conform to ANSI/TIA/EIA-568A and rack mounted.
- b) Shall be equipped with RJ45 contacts of Cat 6A sockets with capacity of 12, 24 or 48 ports.
- c) Shall be earthed.
- d) Except for patch cords used to connect NICs to the RJ45 sockets, all patch cords shall be labeled at each extremity with PVC support and intelligible marking. For other components the label shall be of stiff plastic PVC type.

Item	Cat 6A UTP Patch Panel Minimum specifications
Brand	State the brand, model and attach Technical Brochure (Mandatory)

Ports	24/48 Ports
Characteristics	<p>Operating Temperature: -10 to 60 °C, (14 to 140 °F) Flammability Rating: UL 94 V-0 Green Features: RoHS, lead-free, halogen-free, PVC free Plastic Materials Flame retardant thermoplastic Dimensions (LxWxH):109.2 mmx 482.6mm x 44.2mm (4.30"x19.00" x1.74 ") Mounting: CEA-310-E 19-inch (482.6mm) rack Material – Panel: 18 gauge cold rolled steel, black e-coat Ground Lug Attachment: 3/8" 1 hole or two-hole lug (1"spacing)</p>
Industry Compliance	<p>STANDARDS COMPLIANCE</p> <ul style="list-style-type: none"> • ANSI/TIA-568-C.2 • ISO/IEC 11801 Ed 2.2 • ETL Tested • IEC 60603-7 • IEC 60603-7-51 • IEEE 802.3an • IEEE 802.3af (PoE) • IEEE 802.3at (PoE+) • ANSI/TIA-1096-A
Warranty	<p>End-to-End Manufacturer's Warranty on Cabling System <i>(Attach Manufacturer's Warranty Statement)</i> Minimum 5 Years</p>

(State make and type, and enclose catalogues)

d) FACE PLATES - COMPLETE WITH TWIN SCREENED MAX MODULES

Item	Minimum Specifications	Proposed Solution
Brand	State the brand, model and attach Technical Brochure (Mandatory)	
Construction	<p>Complete with screen Twin MAX RJ45 Modules</p> <ul style="list-style-type: none"> · Double gang faceplates for each designated work area point. · UV resistant, high impact plastic preventing color fading and provides added durability 	
Wiring	T568A and T568B	
Face Plate Characteristics	<ul style="list-style-type: none"> · Single · Label Covers- Faceplates include pressure-release designation label covers for quick, tool-less removal · With icon/label provision 	
	<ul style="list-style-type: none"> · With doors/shutters · British Standard (85mm x 85mm) · White 	
Module Characteristics	<p>100/100/10Gbs</p> <p>Backward compatible</p>	

	Max DC Resistance: 9.4ohms/100m 100-250Mhz: 100ohms±22% 1-100Mhz : 100ohms±15% NVP:	
Industry Compliance	<ul style="list-style-type: none"> · ISO/IEC 11801: 2002 2nd Edition(Category 6) · ANSI/TIA/IEC 754 and IEC 1034 · IEC 61156-5 1st Edition 	
	<ul style="list-style-type: none"> · LSOH :IEC 754 and IEC 1034 · UL CMX · UL CMP and CSA FT6 	
Warranty	End-to-End Manufacturer's Warranty on Cabling System (Attach Manufacturer's Warranty Statement) Minimum 15 Years	

2.11 NETWORK CONTROL EQUIPMENT AT THE NETWORK CORE

The active control equipment at the core should have the following features:

- a) Backplane/switch fabric Bandwidth Capacity of 150 GBPS or more.
- b) IEEE 802.3 compliant for power over Ethernet
- c) IEEE 802.1 based security compliant
- d) SNMP compliant for security
- e) Layer 2/3/4 switch
- f) Should support Gigabit Ethernet to the desktop
- g) Should have at least 12-slots
- h) The core switches should have two links to each edge switch configured in active/active configuration. The links should deliver 2GBPS throughput when all ports are active.
- i) The core switch should have redundant power supply, redundant fan tray and redundant CPU/ supervisor engine installed
- j) Fiber cable linking stacks on each edge switch to the core should be connected to 1000Base X(GBIC) port on the core switch using star topology
- k) Should be installed with the latest version of system software at the time of delivery.
- l) Should support Quality of service for various applications.
- m) Active devices shall be rack mounted.
- n) Active devices used at the LAN edge must be stackable and shall attach to the backbone cabling at 1000mbps.
- o) Where more than one active device is required to satisfactorily serve the floor data outlet distribution requirements they shall be stacked using interface operating at the backbone speed.

(State make and type, and enclose catalogues)

2.12 LABELING

- a) Horizontal and backbone cables shall be labeled at each end. The cable or its label shall be marked with its identifier.
- b) A unique identifier shall be marked on each faceplate to identify it as connecting hardware.
- c) Each port on the face plate shall be labeled with its identifier.
- d) A unique identifier shall be marked on each piece of connecting hardware to identify it as a connecting hardware.
- e) Each port on the connecting hardware shall be labeled with its identifier.

- f) A unique identifier shall be marked on each port on the connecting faceplate to identify it as a connecting hardware.

2.13 NETWORK CABINET

DATA CABINET AND ACCESSORIES RACKS TECHNICAL SPECIFICATIONS		
Item	Minimum Specifications	Proposed Solution
Brand	State the brand, model and attach Technical Brochure (Mandatory)	
Product description	Rack -ventilated -(42HU, 36U, 22U, 6U as per the BQ)	
Product type	Ventilated rack	
Rack sized	42/36/22/6"	
Dimensions	Minimum 600mm x 600mm to fit the active components	
Construction	<ul style="list-style-type: none"> · The front Clear Glass door, back door mesh door. · Front/rear locking double section door, enable ventilation and reliable operation. · Wire path on the top and bottom can be closed. · High grade knob and lock. · Wire groove with Wide cable manager on the two sides. · Detachable composite structure, more convenient for being shipped · Material: SPCC quality cold rolled powder coated steel · Color: (Silk Grey) · Surface finish: degrease, acid pickling, rust prevention and Parkerizing, pure water cleaning, static electricity plastic painting 	
Power	<ul style="list-style-type: none"> · Pre-wired 240V AC conditioned grounded power circuit · 6 Outlet Power Distribution Unit Included · Supplied with Earth Bond Kit and Cage nuts 	
Standards	Comply with ANSI/EIA RS-310-D, IEC297-2, DIN41494; PART1, DIN41494; PART7, GB/T3047; 2-92STANDARD	

(State make and type, and enclose catalogues)

2.14 NETWORK SWITCH 48port/24port/12port

a) Item	Minimum Specifications	Proposed solution
Brand	State the brand, model and attach Technical Brochure (Mandatory) – The Switch should currently be supported by the Manufacturer and not less than 5 years to end of life.	
Features	<ul style="list-style-type: none"> · Full Power over Ethernet Plus (PoE+) capability · Downlinks total 10/100/1000 MBPS or PoE+ copper ports: 24, 48 ports data · Uplink configuration: Modular uplink options (2 No. 1G Gigabit Ethernet Combo) · Default primary AC power supply: 240VAC · Fans: FRU redundant · Operational efficiency with optional backplane stacking, supporting stacking bandwidth up to 52 Gbps · Switch Fabric forwarding Bandwidth of 64GBPS or more. · Total stack throughput bandwidth of 16 GBPS or more. · UADP 2.0 Mini with integrated CPU · AES-128 MACsec encryption · Layer 3 capabilities, including OSPF, EIGRP, ISIS, RIP, and routed access · Advanced network monitoring using Full Flexible NetFlow 	
Specs	<ul style="list-style-type: none"> · More than 12,000 MAC addresses. · Default AC power supply AC 240V · Switching capacity: <ul style="list-style-type: none"> > 20 Gbps for 10 port > 52 Gbps for 26 port > 56 Gbps for 28 port > 104 Gbps for 48 port · Forwarding rate: <ul style="list-style-type: none"> >14.88 Mpps for 10 port >38.69 Mpps for 26 port >41.66 Mpps for 28 port >77.38 Mpps for 48 port · 195W POE Budget · Total number of MAC addresses: <ul style="list-style-type: none"> >8000 for 26 port >16000 for 28 port · Total number of IPv4 routes (ARP plus 	

	learned routes) : > 32 static routes for 26 port > 990 static routes for 28 port · Packet buffer per SKU: >12 MB Buffer for 26 port >1.5 MB Buffer for 28 port · Mean time between failures (hours) - >430341	
RAM& accessories	· Flash-> = 256 MB	
Support	Locally Available Technical Support Services(Manufacturer's	
Warranty	Manufacturer's Limited Lifetime Warranty	

(State make and type, and enclose catalogues)

2.15 MULTIMODE FIBRE OPTIC CABLE

Item	Minimum Specifications
Brand	State the brand, model (Mandatory)
Construction	Steel Tape armoured with Glass Yarn
Armour	Corrugated Steel Tape Armour
Cable characteristics	<ul style="list-style-type: none"> - Support for 10GBASE-T -Low Density Polyethylene Sheath -Gel Filled Loose Buffer Tube -Level 1 Rodent Protection - Crash(N) at least 2500 -Torsion (Turns/M) not more than 5 Multimode
Fibre Specifications	-8-Core indoor Premium fiber meeting IEEE 802.3 10 Gigabit ethernet Standard as well as IEC-60793-2-10 and TIA-492AAAC specifications for laser bandwidth Differential Mode Delay(DMD) specifications
	<ul style="list-style-type: none"> - 900 μm tight buffer - 250μm coated optical fibre - Length markings in 2 ft. increments - Available in OFNR, OFNP and LSOH constructions - jacket Material is Lead Free - RoHS compliant
Industry Compliance	- ISO/IEC 11801:2002 OM3
	-ANSI/TIA/EIA-568-B.3
	- ANSI/TIA/EIA-568-B.3-1

	<ul style="list-style-type: none"> - ANSI/TIA-598-C - Telcordia GR-409-CORE - LSOH: IEC 60332-1, IEC 61034, IEC 60754 - OFNR: Communications Type OFNR(UL) and FT4 c(UL) - TIA-492AAAC laser bandwidth DMD specification
	<ul style="list-style-type: none"> - IEC 60793-2-49 and TIA/EIA 455-220 DMD measurement test procedure

(State make and type, and enclose catalogues)

2.16 FIBER PATCH PANELS

All Backbone Fiber links should be terminated on Fiber Patch Panels. Connector interfaces should support ST, Sc simplex, Sc duplex, FC, LC or MT-RJ.

(State make and type, and enclose catalogues)

2.17 BACK BONE

Backbone cabling inclusive of switches and all necessary accessories shall be carried out in readiness for the termination of edge switches.

The Backbone cabling shall be flexible and allow for easy 'add ons' for future expansions. Hence enough capacity shall be allowed for future expansion. It shall be done using the star topology.

2.18 NETWORK MANAGEMENT SYSTEM

The Network Management System (NMS) enables Service Providers to Manage all Links in the Network from a Network Operations Center (NOC). With NMS, Service providers should monitor and configure up to 10,000 links.

Bidders must propose the manufacturers Network Management system for centralized configuration, maintenance and troubleshooting of active equipment. Third party standalone systems should not be offered as part of the solution.

Features and functionalities of the system should include the following:

- a) Should be compatible with Microsoft windows/Linux operating systems
- b) Graphical User Interface for central Management and network viewing
- c) Network discovery and inventory management
- d) VLAN, multicast, security and load-balancing/fail over configuration
- e) Downloading and saving of log file from the device flash memory
- f) Centralized upgrade/backup and archiving of active devices
- g) Export of network topology to JPEG or other standard formats

2.19 WIRELESS ACCESS POINT

Item	Minimum specification	
Brand	State the brand, model and attach Technical Brochure (Mandatory)	
Features	<ul style="list-style-type: none"> ➤ Networking Interface - (3) 10/100/1000 Ethernet Ports ➤ Buttons - Reset ➤ Power Method - 802.3at PoE+ Supported ➤ Power Supply - UniFi PoE Switch (Not Included) ➤ Power Save - Supported ➤ PoE Out - 48V Pass-Through (Pins 1, 2+; 3, 6-) ➤ Maximum Power Consumption with PoE Passthrough – 7W/ 19W* ➤ Maximum TX Power <ul style="list-style-type: none"> 2.4 GHz 20dBm 5GHz 20 dBm ➤ Antennas - (1) Dual-Band Antenna, Single-Polarity <ul style="list-style-type: none"> 2.4 GHz 1 dBi 5 GHz 2 dBi ➤ Wi-Fi Standards - 802.11 a/b/g/n/r/k/v/ac ➤ Wireless Security - WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES) ➤ BSSID - Up to 8 per Radio ➤ Mounting - 1-Gang Electrical Wall Box (Not Included) ➤ Operating Temperature - -10 to 50° C (14 to 122° F) ➤ Operating Humidity 5 to 95% Noncondensing ➤ Certifications CE, FCC, IC <p>* Requires 802.3at PoE+ switch</p>	
Advanced Traffic Management	<ul style="list-style-type: none"> ➤ VLAN - 802.1Q ➤ Advanced QoS - Per-User Rate Limiting ➤ Guest Traffic Isolation - Supported ➤ WMM - Voice, Video, Best Effort, and Background ➤ Concurrent Clients - 250+ 	
Supported Data Rates (Mbps)	<ul style="list-style-type: none"> ➤ Standard - Data Rates ➤ 802.11ac - 6.5 Mbps to 867 Mbps (MCS0 - MCS9 NSS1/2, VHT 20/40/80) ➤ 802.11n - 6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40) ➤ 802.11a - 6, 9, 12, 18, 24, 36, 48, 54 Mbps ➤ 802.11g - 6, 9, 12, 18, 24, 36, 48, 54 Mbps ➤ 	

2.20 DESKTOP COMPUTER

DESCRIPTION	MINIMUM SPECIFICATIONS
Operating System	Windows 11 Pro 64
Processor and graphics	12th Generation Intel® Core™ i7 processor + Intel® UHD graphics 770
Display	23.8 Inch Monitor NBT™(1920 x 1080)
Memory	➤ 8 GB DDR4-3200 MHz RAM (1 x 8 GB)
Storage	➤ 512 GB PCIe® NVMe™ M.2 SSD
Office Software	<ul style="list-style-type: none"> ➤ Microsoft® Office 2019 Home and Business ➤ Microsoft(R) Office 2019 Professional
Battery Life	Up to 13 hours and 30 minutes (mixed usage) Up to 10 hours and 30 minutes (video playback) Up to 10 hours and 30 minutes (wireless streaming)
Wireless Technology	Realtek RTL8822CE 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 wireless card
Network Interface	Integrated 10/100/1000 GbE LAN
Pointing device	HP 125 Wired Mouse
Expansion slots	2 M.2; 1 PCIe 3 x1; 1 PCIe 4 x16 4 5 6 (1 M.2 slot for WLAN and 1
Keyboard	HP 125 Wired Keyboard
Dimensions (W x D x H)	5.5 x 30.3 x 33.7 cm
Optical drive	HP 9.5 mm Slim DVD-Writer
Wireless	Realtek RTL8822CE 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth®
Power Supply	180 W external power adapter, up to 90% efficiency, active PFC ⁷
Energy Efficiency	ENERGY STAR® certified; EPEAT® Silver registered
Warranty	1 Year limited hardware warranty

2.21 INTERNET PROTOCOL PRIVATE BRANCH EXCHANGE SYSTEM

IP-PBX		
TECHNICAL SPECIFICATIONS		
Item	Minimum Specifications	Proposed Solution
Brand	Globally Recognized Brand like PANASONIC or Equal and approved Equivalent (<i>Please specify and attach product brochure</i>)	
Features	<ul style="list-style-type: none"> • Hot desking features for phones in shared desks • Visual mailbox access • Audio conferencing • Workgroup and Audio Notifications • Simplified UC management • Plug and Play with zero-touch deployment of LAN switches • All-in-one scalability to 100 users • Call recording, queuing, call back, emergency call • Enterprise presence • Multi-line telephony • Unified instant messaging • Workgroup and Audio Notifications • Hybrid analog, digital, IP, SIP endpoints and trunks 	
Communication experience	<ul style="list-style-type: none"> • Multiline telephony • Directory search and call by name • Visual voicemail and call log • Message waiting indication • Presence • Computer Telephony Integration (CTI) • Phones with color screen, touch screen, customized display • Navigation by touch screen and keyboard • Hands-free, wideband, high quality audio • Phone models with Bluetooth handset • Add on modules 	
Conversation service	<ul style="list-style-type: none"> • Mobility services: Nomadic mode, Routing to multiple devices (Business phone, DECT or WLAN handset, PC, smartphone), One number service, User-defined routing rules. • Hot-desking/desk sharing • Business communications services: Call option, speed dial, Call back, call queuing, Call pickup, barge-in, Call diversion, Dynamic routing: (No answer, busy), Call recording, Paging, DISA • Team and group: Workgroup and key system, Groupware supervision, Audio notifications, Group: (broadcast, parallel, cyclical, sequential modes), Manager assistant services • Conference: 3-party conference, 6-party conference, IP Conference Phone (5 legs), Conference on SIP devices (3 legs) 	

	<ul style="list-style-type: none"> Emergency number: Virtual number: (Location, PSAP), Local notification service 	
Supported phones	<ul style="list-style-type: none"> Analog 2 wires: Native analog ports, FXS SIP gateway 2/4/8 ports. Wireline business phones (NOE protocol) Mobile business handsets IP Desktop Softphone: NOE/IP SIP phones VoIP softphone OpenTouch Conversation (OTCV): Android Conference Modules 	
Customer welcome services	<ul style="list-style-type: none"> ACD and business calls can be handled simultaneously on business phone Applications: Agent menus from phone and PC application, Supervisor PC application for real time ACD activity monitoring of agents and group call queuing, Statistic services with predefined reports Services: Group selection (Longest idle time, rotating, priority, fixed priority), Group overflow and priority levels between groups, Group Queue and Voice guidance, Customer code, Screen pop/CRM 	
Smart call routing (SCR)	<ul style="list-style-type: none"> Up to 100,000 routes Routing by criteria: Customer code, CLI, DDI, defined planning Routing destinations: ACD, MLAA, any destination 	
Welcome greeting	<ul style="list-style-type: none"> Personal assistant Attendant services: Attendant group, call queuing, call overflow; Time range: Daily, weekly, bank holidays, restrict mode control; Alarm indicator → PBX and end user management Greetings: Company greetings, Night greetings. Music on hold Automated attendant (2 levels) Multiple Language Automated Attendant (MLAA): 5 trees with 3 levels per tree: 5 languages per tree: Time range Multiple company welcome: Up to 4 companies 	
UC services	<ul style="list-style-type: none"> Contact management, presence, calendar sharing, chat, audio/video call, screen and file sharing; Persistent group chat with audio/ video/screen sharing conference capabilities; Audio conference up to 100 participants 	
Verticals services	<ul style="list-style-type: none"> Metering: Metering counters and traffic counters, Accounting link, Printout facilities, Local call metering: XML/HTTP, Account code, Duration-based forced disconnect Messaging: Voicemail: Up to 500 mailboxes, 200 hours, Instant Messaging (IM), Text messaging (exclusive of IM), Voicemail in email, Call log in email Directory services: Dial by name: Auto and unified modes, Universal Directory Access: External LDAP 	

	server, Integrated Directory, Common and personal directories	
Software	<ul style="list-style-type: none"> OS: Linux 	
System architecture	<ul style="list-style-type: none"> All-in-one chassis Hybrid IP and TDM switching Hybrid cloud UC solution 	
Capacity	<ul style="list-style-type: none"> Max users (devices):Power CPU EE: 300 , Power CPU EE C25: 25 BHCA 1500 	
Networking and topology	<ul style="list-style-type: none"> Multi-sites: Up to 5 sites, Directory synchronization via management console Networking: ISVPN (T0/T2), QSIG-BC (DLT0 DLT2), Private SIP trunks, multiple SIP trunks, Automatic Route Selection (ARS): 3000 entries, time range, Least Cost Routing Branch office: Remote business phone: IPSEC VPN 	
Connectivity	<ul style="list-style-type: none"> IPv4 HTTP/HTTPS VoIP: G.711, G.729, G.722, codec path through (direct RTP) |QOS: TOS, DiffServ, 802.1 p/Q |Direct RTP, RTP proxy, integrated software media server |DTMF: In-band, RFC 2833 |IETF/ RFC standards FAX: G.711 transparent fax |T.38: Direct RTP only WebRTC VOIP services over the Internet |Firewall friendly port forwarding and VPN less |Encrypted media, STUN/TURN Management: Remote Access | Integrated VPN IPsec |ISDN (1 or 2B), call back SIP: Public SIP trunk | Private SIP trunk | SIP endpoints (local users) DECT base stations:8378 DECT IP-xBS: GAP and AGAP |8318 SIP-DECT Single Base Station: SIP, GAP |8379 DECT IBS: GAP and AGAP WLAN 	
Security	<ul style="list-style-type: none"> User Authentication: Password 6 digits |Access locked after repeated authentication errors, notification |Normal/restricted modes |User right to services |Pin for remote access (DISA) Certificate: Server self-signed, Import for public authority WAN access: HTTP proxy compliant SIP Authentication: RFC2617 Traffic filtering: ARP spoofing protection| SIP perimeter defense: Quarantine, blacklist, automated blacklist |Connection tracking Encryption: SSLv3 for secure HTTP |HTTPS 	
Interface boards	<ul style="list-style-type: none"> Terminals: Digital Interfaces UAI 8, 16 |Analog Interfaces SLI 8, 16 Network: BRA boards: 4, 8 T0 |PRA boards: 1 T1, T2 |Analog trunk: (1) 2 |Mixed boards: T0/UA/SL 2/4/4, 4/4/8, 4/8/4 |Analog mixed boards: APA/UA/SL 4/4/4-1, 4/4/8-1, 4/8/4-1 |Mini- 	

	<p>MIX2/0/2</p> <ul style="list-style-type: none"> LAN : 0/100/1000 BT auto-sense unmanaged 	
Hardware CPU Board	<ul style="list-style-type: none"> PowerCPU EE (PowerPC e300): Chassis: Compact |16 VoIP DSP channel (embedded) |VoIP 64 optional daughter board: 76 VoIP channels |Memory Storage daughter board (MSDB): 8GB (eMMC) Daughter board (optional) |AFU: CD-player, door phone, loudspeaker |HSL1 or HSL2: for multiple cabinet interconnection |MiniMIX 2/0/2 (compact chassis only) 	
Chassis	<ul style="list-style-type: none"> 2U rack: 5 free modular slots |Power maximum/typical: 88W/40W |Noise level: Max 41dBA Rack: Fan |19-inch rack |AC/DC power supply: Integrated |Backup battery: Internal |Installation: rack |Combination: up to 3 chassis, maximum of 27 free slots. 	
Warranty	Comprehensive Manufacturer's Warranty (Attach Manufacturer's Warranty Statement)	

IP EXECUTIVE PHONE

TECHNICAL SPECIFICATIONS

Item	Minimum Specifications	Proposed Solution
Brand	Globally Recognized Brand like Panasonic or Equal and Approved Equivalent (<i>Please specify and attach product brochure</i>)	
Feature	<ul style="list-style-type: none"> Enhanced High Definition voice quality, Super Wideband ready Best in class power consumption Optimized ergonomics Navigator Dedicated function keys Backlit display Intuitive icons and soft keys Alphabetic keyboard Built-in security Dual stack NOE & SIP protocol IPv4/IPv6 Unified Communication companion Embedded software encryption capabilities Customization capabilities 	
Connectivity	<ul style="list-style-type: none"> RJ-45 LAN: Gigabit Ethernet 10/100/1000 RJ-45 PC through 10/100/1000 Gigabit Ethernet switch RJ-9 connector for corded handset RJ-9 connector for alphanumeric keyboard 3.5 mm jack 4 pole headset port SATA connector for external ringer and audio active envelop indicator 2.1 x 5.5 mm DC power jack plug socket for 	

	<ul style="list-style-type: none"> external AC/DC power adapter • USB A 2.5 W (5V, 500mA), upgradeable to support 4.5W (5V, 900mA) • USB C for future use (8078s BT, 8078s, 8068s BT, 8068s, 8058s) • 8078s BT, 8078s, 8068s BT, 8068s Bluetooth 4.1 Smart Ready (Classic & BLE) embedded: Wideband Bluetooth handset with 2 pin charge contacts and Bluetooth headset support 	
KeyPad	<ul style="list-style-type: none"> • Navigator: 8078s BT, 8078s: Touch screen with tool bar |8068s BT, 8068s, 8058s, 8028s: 4-way navigation + OK + cancel • Contextual keys: –8078s BT, 8078s, 8068s BT, 8068s: 2 x 5, 8058s: 2 x 3 • Function keys: On/off hook, dial pad, mute with LED, volume keys ±, hands-free with LED, 2 personal keys/LED, redial, info and message with LED • Programmable keys: <ul style="list-style-type: none"> • 4 programmable lighted keys, smart-add-on module 8028s • 4 programmable keys with LED and paper label • Magnetic alphabetical keyboard 	
Network and provisioning	<ul style="list-style-type: none"> • IP NOE and SIP v2 (RFC3261) • DHCP and static IP: Manual or dynamic host configuration protocol (DHCP) network setup (RFC2131) • QoS support: IEEE 802.1p/Q tagging (VLAN), Layer 3 TOS, and DSCP, QoS tickets • LLDP-MED • IEEE 802.1 AB/LLDP-MED client (IPv4/ IPv6, automatic VLAN acquisition, PoE management, inventory information) • Energy Efficient Ethernet 802.3 az support 	
Languages	<ul style="list-style-type: none"> • Multi-language support (menu) 	
Protocols & advanced telephony	<ul style="list-style-type: none"> • IP NOE or SIP (RFC 3550, 2833, 3261, 3263, 3264, 3265, 3515, 3892, 3960, 4566, 5359, 6086) • MLE advanced telephony • SMB Advanced telephony 	
Security	<ul style="list-style-type: none"> • Authentication: Basic or digest, 802.1x – 802.1x Message Digest 5 (MD5)/TLS: For authentication, customer certificates management (with centralized deployment) |Denial of service (DoS) attack protection: Flooding |ARP spoofing protection • IP Sec VPN support 	
Power	<ul style="list-style-type: none"> • Power over Ethernet (IEEE 802.3af) 	
Warranty	Comprehensive Manufacturer's Warranty (Attach Manufacturer's Warranty Statement)	

STANDARD IP PHONE		
TECHNICAL SPECIFICATIONS		
Item	Minimum Specifications	Proposed Solution
Brand	Globally Recognized Brand like Panasonic or Equal and Approved Equivalent (<i>Please specify and attach product brochure</i>)	
Feature	<ul style="list-style-type: none"> • IP telephony • Wideband device • Advanced telephony features • 6 Softkeys • 4-way navigator • Programmable keys • Lighted keys and notifications (Incoming call, message, audio control, programmable keys) • 128 x 64 B&W graphical display • 2-port Gigabit • Supports 802.3az • Power over Ethernet class 1 for low power consumption 	
Connectivity	<ul style="list-style-type: none"> • RJ -45 LAN:10/100/1000 Ethernet • RJ -45 PC through port:10/100/1000 Ethernet • RJ-9 connector for corded handset • RJ-9 connector for headset 	
KeyPad	<ul style="list-style-type: none"> • Volume control keys (+ and -) • Hands-free on/off key • Navigator: 4-way navigation • OK, cancel keys • Numeric to alpha keypad: To switch to alpha character and perform dial-by-name, for example • F1, F2 (or hold/transfer) with LED • Mute and Message keys • Dial pad and call/redial/release key • 6 Contextual keys around the screen 	
Network and provisioning	<ul style="list-style-type: none"> • IP NOE and SIP v2 (RFC3261) • DHCP and static IP manual or dynamic host configuration protocol (DHCP) network setup • IEEE 802.1 AB/LLDP-MED 	
Languages	<ul style="list-style-type: none"> • Multi-language support (menu) 	
Security	<ul style="list-style-type: none"> • Supports IPsec VPN • Denial of service (DoS) attack protection: Flooding • ARP spoofing protection 	
Power	<ul style="list-style-type: none"> • Power over Ethernet (IEEE 802.3af) • Class 1 support (<3.84W) 	
Warranty	Comprehensive Manufacturer's Warranty (Attach Manufacturer's Warranty Statement)	

SECTION VII
TECHNICAL SCHEDULE
OF
ITEMS TO BE SUPPLIED

TECHNICAL SCHEDULE

- 1.0 The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders
- 2.0 The filling of this schedule forms part of Technical Evaluation of the tenders, and bidders shall therefore be required to indicate the type/make and country of origin of all the materials and equipment they intend to offer to the employer as listed in the technical schedule.
- 3.0 **Any bid returned with unfilled Technical Schedule shall be considered technically non-responsive, and the bidder shall automatically be disqualified.**

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED
(To be Completed by the Tenderer as a Mandatory Requirement)

ITEM	DESCRIPTION	TYPE/MAKE	COUNTRY OF ORIGIN
1	Network Switch		
2	CAT 6A Cable		
3	Fibre Optic Cable		
4	Uninterruptible Power Supply		
5	Data Outlet Plates		
6	Data Cabinet		
7	Patch Panels		
8	Wireless Access Point		
9	Dome Camera		
10	PTZ Dome Camera		
11	Bullet Camera		
12	Network Video Recorder		
13	Display Screen		
14	Telephone Equipment (IP-PBX)		

Detailed manufacturer's Brochures detailing Technical Literature and specifications on the above items **MUST** be attached and Items to be supplied highlighted (Model and Make).

MECHANICAL WORKS

Bill No. 1: Preliminaries

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	Discrepancies: The Contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone. Should the drawing and the specification appear to conflict, the Sub-contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.				
2	Conditions of sub-contract Agreement: The Contractor shall be required to enter into a Sub-contract with the Main Contractor.				
3	Payments: Payment will be made through certificates to the Sub Contractor, all payments will be less retention as specified in the Contract. No payment will become due until materials are delivered to site				
4	Site location: The site of the Contract Works is GATUNDU, KIAMBU COUNTY. The tenderer is recommended to visit the site and shall be deemed to have satisfied himself with regard to access, possible conditions, the risk of injury or damage to property on/or adjacent to the site, and the conditions under which the sub-contract Works shall have to be carried out and no claims for extras will be considered on account of lack of knowledge in this respect.				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
5	<p>Scope of Contract Work: The contactor shall supply, deliver, unload, hoist, fix, test, commission and hand hover in satisfactory working order the complete installations specified hereinafter and/ or as shown on the contract Drawings attached hereto , including the provisions of labour,transport and plant for unloading material and storage, and handling into position and fixing also the supply of ladders, scaffolding the other mechanical devices to plant, installation, painting, testing, setting to work the removal from the site from time to time of all superflous material and rubbish caused by the works.</p> <p>The contractor shall supply all accessories, whether of items or equipment supplied by the Sub-Contractor but to be fixed and commissioned under this contract.</p>				
6	<p>Extent of the Contractor's Duties: At the commencement of the works, the contractor shall investigate and report to the Engineer if all materials and equipment to be used in the work and not specified as supplied by the others are available locally. If these materials and equipment are not available locally, the contractor shall at this stage place orders for the materials in question and copy the orders to the Engineer</p>				
7	<p>Firm price contract: Unless specifically stated in the documents or the invitation to tender, this is a firm-price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract</p>				
8	<p>Variation: No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager</p>				
9	<p>Prime cost and provisional sum: A specialist Sub-contractor may be nominated by the Project Manager to supply and/or install any equipment covered by the Prime Cost or Provisional Sums contained within the Contract documents (insert profit and attendance which is a percentage of expended PC or provisional sum.)</p>				
	<p>Sub-Total for Preliminaries c/f</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
10	Bond: The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the Government for an amount equal to 5 % of the Contract amount				
11	Government Legislation and Regulations: The Contractor's attention is called to the provision of the Factory Act 1972 and subsequent amendments and revisions, and allowance must be made in his tender for compliance therewith, in so far as they are applicable. The Contractor must also make himself acquainted with current legislation and any Government regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc.				
12	Import Duty and Value Added Tax: The Sub-contractor will be required to pay full Import Duty and Value Added Tax on all items of equipment, fittings and plant, whether imported or locally manufactured. The tenderer shall make full allowance in his tender for all such taxes. (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)				
13	Insurance company Fees: Attention is drawn to the tenderers to allow for all necessary fees, where known, that may be payable in respect of any fees imposed by Insurance Companies or statutory authorities for testing or inspection				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
14	<p>The main Contractor shall make the following facilities available to the Sub-contractor:</p> <p>a) Attendance on the Sub-Contractor and the carrying out of all work affecting the structure of the building which may be necessary, including all chasing, cutting away and making good brickwork, etc., except that all plugging for fixing, fittings, machinery, fan ducting, etc., and all drilling and tapping of steel work shall be the responsibility of the Sub-contractor. Any purpose made fixing brackets shall not constitute Builder's Work and shall be provided and installed by the Sub-contractor unless stated hereinafter otherwise.</p> <p>b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized.</p> <p>c) Fixing of anchorage and pipe supports in the shuttering, shall be supplied by the Contractor who shall also supply the Project Manager with fully dimensioned drawings detailing the exact locations.</p> <p>d) i) Provision of scaffolding, cranes, etc. It shall be the Contractor's responsibility to liaise with the Project Manager to ensure that there is maximum co-operation with other nominated Sub-contractors in the use of scaffolding, cranes, etc.</p> <p>ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.</p>				
15	<p>Samples and Materials Generally: The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated</p>				
16	<p>Supplies: The Contractor shall submit names of any supplier for the materials to be incorporated, to the Engineer for approval. The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no sources of supply will be changed without prior approval.</p> <p>Each supplier must be willing to admit the Engineer or his representative to his premises during working hours for the purpose of examining or obtaining samples of the materials in question.</p>				
	<p>Sub-Total for Preliminaries c/f to Page 106</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
17	<p>Bills of Quantities: The Bills of Quantities have been prepared in accordance with the standard method of measurement of Building Works for East Africa, first Edition, Metric, 1970. All the Quantities are based on the Contract Drawings and are provisional and they shall not be held to gauge or to limit the amount or description of the work to be executed by the Contractor but the value thereof shall be deducted from the Contract Sum and the value of the work ordered by the Engineer and executed thereunder shall be measured and valued by the Engineer in accordance with the conditions of the Contract.</p>				
18	<p>Contractor's Office in Kenya: The Contractor shall maintain (after first establishing if necessary) in Kenya an office staffed with competent Engineer Manager and such supporting technical and clerical staff as necessary to control and coordinate the execution and completion of the Contract Works.</p>				
19	<p>Builder's Work: All chasing, cutting away and making good will be done by the Contractor. The Contractor shall mark out in advance and shall be responsible for accuracy of the size and position of all holes and chases required. The Contractor shall drill and plug holes in floors, walls, ceiling and roof for securing services and equipment requiring screw or bolt fixings. Any purpose made fixing brackets shall be provided and installed by the Contractor.</p>				
20	<p>Setting to work and Regulating system: The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications, or equal and approved codes as specified hereinafter and as customar. No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted). It will be deemed that the Contractor has included in the Contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the Contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.</p>				
	<p>Sub-Total for Preliminaries c/f</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
21	<p>Identification of plant components: The Contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment. Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.</p>				
22	<p>Working Drawings: The Contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works. If the Contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.</p>				
23	<p>Record Drawings (As Installed) and Instructions: During the execution of the Contract Works the Contractor shall, in a manner approved by the Engineer record on Working or other Drawings at site all information necessary for preparing Record Drawings of the installed Contract Works. Marked-up Working or other Drawings and other documents shall be made available to the Engineer as he may require for inspection and checking. Record Drawings, may, subject to the approval of the Engineer, include approved Working Drawings adjusted as necessary and certified by the Contractor as a correct record of the installation of the Contract Works.</p>				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
24	<p>Maintenance Manual: Upon Practical Completion of the Contract Works, the Contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the Contract Works. The manual shall be loose-leaf type, International A4 size with stiff covers and cloth bound. It may be in several volumes and shall be sub-divided into sections, each section covering one Engineering service system. It shall have a ready means of reference and a detailed index. There shall be a separate volume dealing with Air Conditioning and Mechanical Ventilation installation where such installations are included in the Contract Works.</p> <p>The manual is to be specially prepared for the Contract Works and manufacturer's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the Engineer. The Contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the Engineer.</p>				
25	<p>Hand over: The Contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the Contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer.</p>				
26	<p>Painting: It will be deemed that the Contractor allowed for all protective and finish painting in the Contract Sum for the Contract Works, including colour coding of service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications</p>				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
27	<p>Testing and Inspection – manufactured plant: The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials.</p> <p>The right of the Engineer relating to the inspection, examination and testing of plant during manufacture shall be applicable to Insurance companies and inspection authorities so nominated by the Engineer.</p> <p>The Contractor shall give two weeks’ notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.</p>				
28	<p>Testing and Inspection – Installation: Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.</p>				
29	<p>Storage of Materials: The Contractor shall provide storerooms and workshop where required. He shall also provide space for storage to nominated sub-contractors who shall be responsible for these lock-up shades or stores provided.</p> <p>Nominated Sub-contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager</p>				
30	<p>Initial Maintenance: The Contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.</p> <p>The Contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.</p>				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
31	Attendance Upon Tradesmen, 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 the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.				
32	Local and other Authorities notices and fees: The contractor shall comply with and give all notices required by any Regulations, Act or by Law of any Local Authority or of any Public Service, Company or Authority who have any jurisdiction with regard to the works or with those systems the same are or will be connected and he shall pay and indemnify the Government against any fees or charges legally demandable under any regulation or by-law in respect of the works				
33	Temporary Works Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works. The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contract his programme and schedule of work. He shall ensure equipment optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and				
34	Patent Rights: The contractor shall fully indemnify the Government of Kenya; against any action, claim or proceeding relating to infringement of any patent or design rights, and pay any royalties which may be payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager.				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
35	Mobilization and Demobilization: The contractor shall mobilize labour plant and equipment to site according to his programme and schedule of work. He shall ensure optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and equipment.				
36	Extended Preliminaries: Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor works.				
37	Supervision by Engineer and Site: A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing. The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit and attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor	1	Item	150,000	150,000
38	Allow for profit and Attendance for the above				
	Sub-Total for Preliminaries c/f				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
39	Amendment to Scope of Sub-contract Works: No amendment to scope of sub-contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in sufficient time before the deadline of the tender submission. However, during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions				
40	Contractor Obligation and Employers Obligation: The sub-contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. The contractor shall, where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum.				
40	Any other preliminaries;				
	Subtotal above				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
	Subtotal brought forward				
TOTAL FOR BILL NO. 1 - PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY PAGE					

BILL FOR MECHANICAL WORKS - MAMA NGINA UNIVERSITY

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	WET LABORATORY				
	Lab sink				
A	Laboratory sink to be 552 X 400 X 235mm deep manufactured from polypropylene co - polymer resin black in colour. The sink to be complete with 38mm diameter BSP waste, and black nut, Butyl rubber gasket, To be as 'MS 505' laboratory sinks No. or equal and approved.	10	No		
B	Water taps to be as Laboratory sink two-way mounting fitting tap with inlets concealed supply, one swivel outlet with nozzle as Vultex Labline equipment	10	No		
C	Emergency Drencher Shower Emergency Drencher Shower combination unit of drench shower and eye wash fountain. For use where accidental splashing of acid, chemical or radioactive chemical demands instant attention. Automatic in action, the shower sends down torrential cascade of water as soon as the user pulls the chain. 1 1/4" non-concussive valve with chain and rubber, 305mm diameter shower head with pipe and wall stays. Metal work chrome-plated. The eye wash to have 280mm stainless steel bowl. Eye wash assembly to be stainless steel with ABS spray heads with twin soft flow emergency eyewash heads and instant flip open protective dust cover. Eyewash to have 316 stainless steel 1/2" ips valves that stays open until manually closed. As "Method" "Model ECB 1002SS" or equal and approved.	1	No		
Total carried to the next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total carried from the previous page					
	Copper tubing				
	Supply, deliver and install copper Tubing to BS 2871: part1 and capillary and compression fittings to BS 864: part 2. Tubing must be solid drawn round, clean, smooth and free from defects and from deleterious films in bore.				
A	8/9.8 dia copper tubing	10	Lm		
B	12/14.4 ditto	15	Lm		
C	15/17.4 ditto	8	Lm		
C	18/19.4 ditto	10	Lm		
C	22/25.4 ditto	10	Lm		
	Extra Over Copper Tubing for the below fittings:-				
D	8/9.8 mm diameter Brass Equal Tee	12	No.		
E	8/9.8 x 12/14.4mm diameter Brass Unequal Tee	4	No.		
F	12/14.4 x18/19.4mm diameter Brass Unequal Tee	2	No.		
	Gas Valves				
G	25mm gas stop valve	1	No.		
H	20mm gas stop valve	2	No.		
I	6/8 mm diameter approved quarter turn, lever operated ball valve to BS 5154 and joints to copper tubing and compression to BS 804/2	2	No.		
K	12mm diameter 600mm long gas hose pipe for burner.	12	No.		
L	Pressure Regulator				
	32mm dia. First stage gas pressure regulator as Rego 2403 V.9 complete with connections and brackets for 4No. gas cylinder Tanks.	1	No.		
	32mm dia. Second stage gas regulator as Rego 2503 B for the supply pipe	1	No		
M	Gas Outlet (Tap)				
	Low pressure LP gas outlet with a safety drop lever to prevent accidental "turn on" 2 CFM at 2 p.s.i, 4mm diameter outlet and 1/4" BSP tail with backnut. The outlet shall be 1 way bench gas valve as ' OM 010 - NG' or approved equivalent.	12	No.		
N	Bunsen Burner				
	Bunsen Burner to use the L P. Gas with 9mm outside diameter riffled gas inlet tube and air regulator. Overall height 120mm and burner tube of 13mm outside diameter. The burner shall be as PARCO Ltd Ref. BYB045 R or equal and approved.	12	No.		
Total carried to the next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total carried from previous page					
A	<p>Fume Cupboard Supply, deliver and install a Fume Cupboard of exterior dimensions of 1200mm wide x 1000mm deep x 2400mm high. Fume Cupboard to be complete with sliding plexiglass face with a 12” work opening running full width of cabinet, counterbalance weight at the back, base cabinet with sliding doors, an 8” diameter exhaust collar connections, extract fan, fan flexible connectors overhead instrument control panel, and shall incorporate a Vulcathene Sink, L.P. gas outlet and a non-corrosive bulkhead light. Fume Cupboard to be lined with epoxy coated Aluminium on working surface and sides. Fume Cupboard to be as ‘Nimrod F 3000’ or equal and approved equivalent</p> <p>Fume cupboard extract fan Fume Cupboard extract fan capable of 0.4m³/s against a system Fan to be complete with motor starter, Electrical control panel fixed near the Fume cupboard with ON/OFF and trip and a manual override in the plant room, flexible connections anti-vibration mountings, supports. Fan to be as “WOODS” fume cupboard fan size 12” running at 1400 RPM or equal and approved equivalent.</p>	1	No.		
B	<p><u>Fume Cupboard Extract Ductwork</u> Supply, deliver and install 200mm diameter uPVC ductwork for the fume cupboard above.</p>				
C	200mm diameter uPVC pipework class ‘D’	10	Lm		
D	Holderbats for 200mm diameter pipework	1	Item		
E	200mm diameter Bends	2	No.		
F	200mm diameter ventilating Cowls	1	No.		
G	Weathering Slate for 200mm Ø pipe	1	No.		
H	Weathering Apron for 200mm Ø pipe	1	No.		
I	Undersink water heater with 3 temperature settings with replaceable heating element with a working pressure of 10-200kPa as "Lorenzetti" or approved equivalent	1	No.		
J	1 Way Monoblock Mixer tap, Bench mount, swivel neck & fixed nozzle as " Method BM 118 - 3B1" or approved equivalent	1	No.		
Total Carried Forward to Collection Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	INTERNAL PLUMBING				
	Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .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. for proper functioning of the system.				
	Pipe work-PPR PIPES				
A	25mm diameter pipework	30	Lm		
B	32mm diameter pipework	20	Lm		
C	40mm diameter pipework	20	Lm		
D	50mm diameter pipework	15	Lm		
	Bends				
E	25mm diameter bend	8	No.		
F	32mm diameter bend	2	No.		
G	40mm diameter bend	1	No.		
H	50mm diameter bend	1	No.		
	Tees				
I	25mm equal Tees	10	No.		
J	32mm equal Tees	8	No.		
K	40mm equal Tees	8	No.		
L	50mm equal Tees	6	No.		
Sub-total carried forward to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried forward from previous page					
	Reducers				
A	32 x 25mm diameter	3	No.		
B	40 x 25mm diameter	3	No.		
C	40 x 32mm diameter	3	No.		
D	40 x 50mm diameter	1	No.		
	Unions				
E	25mm diameter pipe unions	5	No.		
F	32mm diameter pipe unions	4	No.		
G	40mm diameter pipe unions	3	No.		
H	50mm diameter pipe unions	3	No.		
	Threaded Fittings				
I	25mm male/female threaded 90° bend/Elbow	5	No		
J	32mm male/female threaded 90° bend/Elbow	4	No		
K	40mm male/female threaded 90° bend/Elbow	3	No		
	Plugs				
L	40mm diameter pipe threaded plug	2	No		
M	50mm ditto	1	No		
	Valves				
N	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating, with wheel and hand joints to steel tubing and complete with round male threaded transition fittings. The gate valve to be as PEGLER or approved equivalent.	3	No		
O	32mm ditto	2	No		
P	40mm ditto	1	No		
Q	50mm ditto	1	No		
R	32mm non-return valve	0	No		
S	32mm medium pressure ball valve	0	No		
	Pipe Sleeves				
T	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	0	Lm		
	Flexible Tubing				
U	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	10	No		
Sub-total carried forward to Collection page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<p>Laboratory drainage Supply, deliver and fix the following in UPVC soil and waste systems to BS 4514 and 5225 with fittings fixed in accordance to the manufacturer's printed instructions and BS 5572 and manufactured by "KEY TERRAIN" for UPVC and vulcathene pipes by "VULCATHENE-DURAPIPE-S&LP" as described. All UPVC and vulcathene branches, Tees, reducing Tees, reducers etc. are to be formed in accordance to the manufacturer's printed instruction. The installations to have the various sizes of connectors, adaptors, sockets, reducers holdbats, clips etc. as required for satisfactory functions.</p>				
	Vulcathene Pipes				
A	51mm diameter waste Vulcathene pipes	42	Lm		
B	38mm diameter waste Vulcathene pipes	18	Lm		
	Bends				
C	51mm diameter Vulcathene sweep bends	12	No		
D	38mm diameter Vulcathene sweep bends	20	No		
	Tees				
E	51mm diameter Vulcathene tees	6	No		
F	38mm diameter Vulcathene tees	8	No		
	Dilution trap				
G	4.5 litres anti-siphonic dilution recovery trap complete with other necessary fittings as METHOD or equal and approved	1	No.		
H	2.3 litres anti-siphonic dilution recovery trap complete with other necessary fittings as METHOD or equal and approved	2	No.		
	Access Caps				
I	51mm diameter Vulcathene access caps	6	No		
J	38mm diameter Vulcathene access caps	10	No		
K	100mm diameter heavy gauge grey mUPVC pipe	18	Lm		
L	Allow for testing and commissioning.	1	Item		
Total to the collection page					

Collection page				
1	Total for Laboratory Equipment b/f from Pg E-17			
2	Total For Laboratory Plumbing b/f from Pg E-19			
3	Total For Laboratory Drainage b/f from Pg E-20			
Total for Laboratory works c/f to Collection page E-39				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<p><u>SANITARY APPLIANCES</u> 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>(i) All sanitary fittings shall be in approved colour.</p> <p>(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.</p> <p>(iii) Equivalent and Approved models may be acceptable.</p> <p>Close coupled WC Close coupled water closet suite complete with horizontal outlet, 6 litre flush cistern, seat and cover and P-trap outlet. dimensions 650 x 355mm Made of vitrous china material white in colour . WC to be screwed on floor, cistern screwed to wall and fixed on wall brackets, All to be as Duravit 21110900002 or approved equivalent.</p>	6	No		
B	<p><u>Water Closet Pan (Squatting)</u> (i) White ceramic water closet squat type pan. The W. C. pan should have a back inlet and come complete with non-slip treads. Preferred W. C dimensions to be 575 x 460 x 360mm. The pan to come complete with appropriate trap, inlet gaskets and all drainage fitments. The pan to be as "Twyford" or approved equivalent.</p>	5	No		
C	<p><u>Flush Valve - Manual Push Button</u> Manual push button action, back inlet squat toilet flush valve with 6 litre per flush. The valve to have a 1 1/4" chrome plated connections with synthetic diaphragm and adjustabel tailpipe. Valve to be as Khengar or approved equivalent.</p>	5	No		
Sub-total carried to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried from previous page					
A	<p>Ambulant Disabled Water Closet suite Low level wash down water closet suite for the elderly and disabled in white complete with horizontal outlet AND BOTTOM SUPPLY AND OVERFLOW WITH CLOSE COUPLING SIDE LEVER TREATMENT, 7.5 litre cistern, raised heavy duty toilet seat and cover and S-trap outlet as DURAPLUS floor standing 010609 and 600 x 35mm stainless steel grab rails (4No.) in stainless steel. The set to be complete with ceramic wash hand basin for disabled as DURAVIT product code 030970, 6mm thick mirror, toilet roll holder and robe hook. Or approved equivalent.</p>	No	1		
B	<p>Wash Hand Basin Semi Pedestal wash hand basin with one cente tap hole and press action taps chrome plated. Gridwaste 1 1/2 inch chrome plated unslotted for overflow as Duravit D -code or approved equivalent.</p>	1	No		
C	<p>Countertop Wash Hand Basin Countertop wash hand basin with one cente tap hole and press action taps chrome plated. Gridwaste 1 1/2 inch chrome plated unslotted for overflow as Duravit Vero #045250 or approved equivalent.</p>	7	No		
D	<p>Mirror 6mm thick polished plate glass, silver backed mirror with beveled edges, size 610x497mm plugged and screwed to wall with 4No. Chrome plated chrome capped screws and 5mm thick foam back nest.</p>	8	No		
Sub-total carried to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried from previous page					
	Urinal Bowl				
A	Ceramic urinal complete with 1No. ceramic urinal bowl, chrome plated flush pipes, 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 Duravit D-Code Ref 82390 or equal and approved.	3	No		
	Urinal Bowl Flush Valves				
B	25 mm urinal bowl flush valve for the above urinal bowls complete with, back entry with integral vacuum breaker, non-hold-open features and non-return valve, inlet control stop and wall plate comprising flush valve, bent chrome plated flush pipe and rubber pipe connector. The flush valve to be as COBRA or equal and approved.	3	No		
	Urinal dividers				
C	Ceramic urinal dividers of dimensions 750mm x 400mm as Duravit model no. 850000 or approved equivalent	4	No		
	Hand Driers				
D	Automatic Hand Drier in white colour, operating on an infra-red automatic sensing system with safety cut-out complete with plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 1.8 kw and to be of size 270 x 64 x 143mm deep as HEATRAE SADIA "Handi Dri" or approved equivalent.	3	No		
	Toilet roll holder				
E	Toilet roll holder in vitreous china to BS 3402 in white colour of size 165x165mm and recessed into wall. Toilet roll holder to be as Twyford's "SEMI RECESSED & ORNAMENTAL" accessories Ref. No. VC 9808 WH	9	No		
	Soap Dispenser				
F	Soap Dispenser, capacity 1.136 litres complete with plastic rawl plugs, fixing screws, lock and key complete with initial fill of soap gel. The soap dispenser to be as ZALPON'S MARK 7 model, size 125 x 100 x 290mm high or approved equivalent	3	No		
	Robe hook				
G	Single chrome robe hooks complete with fixing plates, wall flanges and screws as Jaguar, Kubix Prime or approved equivalent.	9	No		
Sub-total carried to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried from previous page					
	Bill No. 2: INTERNAL PLUMBING Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .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. for proper functioning of the system.				
	Pipe work-PPR PIPES				
A	20mm diameter pipework	60	Lm		
B	25mm diameter pipework	40	Lm		
C	32mm diameter pipework	20	Lm		
D	40mm diameter pipework	15	Lm		
E	50mm diameter pipework	40	Lm		
F	63mm diameter pipework	18	Lm		
	Bends				
G	20mm diameter bend	14	No.		
H	25mm diameter bend	6	No.		
I	32mm diameter bend	6	No.		
J	40mm diameter bend	4	No.		
	Tees				
K	25mm equal Tees	20	No.		
L	32mm equal Tees	15	No.		
M	40mm equal Tees	12	No.		
N	50mm equal Tees	10	No.		
Sub-total carried forward to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried forward from previous page					
	Reducers				
A	25 x 20mm diameter reducer	10	No.		
B	32 x 20mm diameter	10	No.		
C	32 x 25mm diameter	10	No.		
D	40 x 20mm diameter	10	No.		
E	40 x 25mm diameter	10	No.		
F	40 x 32mm diameter	10	No.		
G	40 x 50mm diameter	10	No.		
	Unions				
H	20mm diameter pipe unions	10	No.		
I	25mm diameter pipe unions	7	No.		
J	32mm diameter pipe unions	4	No.		
K	40mm diameter pipe unions	3	No.		
	Threaded Fittings				
L	20mm male/female threaded 90° bend/Elbow	10	No.		
M	25mm male/female threaded 90° bend/Elbow	6	No.		
N	32mm male/female threaded 90° bend/Elbow	4	No.		
O	40mm male/female threaded 90° bend/Elbow	4	No.		
	Plugs				
P	40mm diameter pipe threaded plug	4	No.		
Q	50mm ditto	0	No.		
	Valves				
R	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating, with wheel and head joints to steel tubing and complete with round male threaded transition fittings. The gate valve to be as PEGLER or approved equivalent.	8	No.		
S	32mm ditto	4	No.		
T	40mm ditto	4	No.		
U	50mm ditto	4	No.		
V	32mm non-return valve	4	No.		
W	32mm medium pressure ball valve	4	No.		
	Pipe Sleeves				
X	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	10	Lm		
	Flexible Tubing				
Y	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	20	No		
Sub-total carried forward to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried forward from previous page					
	<p>Bill No. 3: FOUL WATER INTERNAL DRAINAGE Supply ,deliver and install the following UPVC, MUPVC, soil and waste systems respectively to B.S 5255 with fittings fixed to Manufactures Printed instructions and manufactured by reputable manufacturers. Tenderers must allow in their pipework prices for all the 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.</p> <p>MuPVC and uPVC Waste and Soil pipework</p> <p>A 100mm diameter heavy gauge grey mUPVC pipe</p> <p>B 50mm diameter waste pipe</p> <p>C 40mm diameter waste pipe</p> <p>Bends</p> <p>D 100mm diameter long radius bend</p> <p>E 100mm diameter short radius bend</p> <p>F 50mm diameter bend</p> <p>G 40mm diameter 90° bend</p> <p>Tees</p> <p>H 100mm diameter sweep tee</p> <p>I 50mm diameter sweep tee</p> <p>J 40mm diameter sweep tee</p> <p>Access Caps</p> <p>K 100mm diameter access cap</p> <p>L 50mm diameter access cap</p> <p>M 40mm diameter access cap</p>				
		60	Lm		
		30	Lm		
		30	Lm		
		10	No.		
		10	No.		
		8	No.		
		8	No.		
		15	No.		
		15	No.		
		15	No.		
		10	No.		
		10	No.		
		10	No.		
Sub-total carried forward to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-total carried forward from previous page					
	Boss Connectors				
A	100 x 50mm diameter boss connector	10	No.		
B	100 x 40mm diameter boss connector	10	No.		
	Single Branches				
C	100mm diameter single branch	10	No.		
	WC Connectors				
D	100mm diameter WC connector	6	No.		
	Traps				
E	100 x 50mm diameter floor trap and grating	15	No.		
F	Plastic gatings for floor traps as above	15	No.		
	Weathering Slates and Vent Cows				
G	100mm diameter weathering slate and apron.	4	No.		
H	100mm diameter vent cowl	4	No.		
	Testing and Commissioning				
I	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
Sub-total carried forward to collection page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<p><u>Fire Protection</u> Supply, deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer. Supply and install the following fire fighting installation and equipment as described and shown on the drawings. Tenderers should allow for all fittings, jointings couplings including unions and clamps where necessary for the proper functioning of the installation when pricing.</p>				
	<p>Hosereel Installation Hosereel 25mm diameter 30m long swinging type hose reel complete with delivery valve, mild steel feed pipe, isolation valve, guide and all other accessories as "Angus Fire Armour" or equal and approved.</p>	3	No.		
A					
	<p>GMS pipe 50mm diameter gms pipe class "B"</p>	100	Lm		
B					
	<p>25mm diameter gms pipe class "B"</p>	20	Lm		
C					
	<p>EXTRA OVERS</p>				
	<p>D 50mm Bends</p>	20	No.		
D					
	<p>E 25mm Bends</p>	10	No.		
E					
	<p>F 50mm equal tee</p>	10	No.		
F					
	<p>G 50mm x 25mm Reducer</p>	3	No.		
G					
	<p>H 50mm gate valve sa peggler or approved equivalent</p>	3	No.		
H					
	<p>I 25mm -ditto-</p>	3	No.		
I					
	<p>J 50mm non-return valve</p>	3	No.		
J					
	<p>Reducers</p>				
	<p>K 50 x 25 mm diameter reducer</p>	3	No.		
K					
	<p>Unions</p>				
	<p>L 25mm diameter pipe unions</p>	4	No.		
L					
	<p>M 50mm diameter pipe unions</p>	18	No.		
M					
	<p>Painting Allow for painting of the hosereel installation with 2 coats of super gloss paint on a primer coat to the approval of the Project Engineer.</p>	1	Item		
N					
Total carried to next page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total brought forward from previous page					
A	9 litres water/carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets. Carbon Dioxide Gas Fire Extinguisher	3	No		
B	5kg carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets. Dry Chemical Powder Fire Extinguisher	3	No		
C	9kg dry chemical powder portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets. Manual Alarm Bell	3	No		
D	9" (225mm) manual operated alarm bell (Gong) Fire Notices	1	No		
E	Allow for fire signage for the hose reel system, fire exits and fire instructions as as described in the particular specifications and to the Project Engineer's approval.	3	No		
Total Carried Forward to collection Page for Fire Fighting					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
DRY RISER INSTALLATION					
Supply and installation the following fittings for dry riser					
A	Sheet Metal Box Inlet breeching sheet metal box with wired glass door secured with spring locks openable from inside by smashing the glass and releasing the locking devices on the lock. Approximate size to be 595 x 295 x 395mm high.	0	No		
B	Fire Brigade Breeching Inlet 100mm diameter inlet breeching with twin inlets, each inlet consisting of a 65mm diameter male instantaneous coupling with a non-return valve and black cap secured with a short length of chain.	0	No		
C	Landing Valve 65 mm diameter, gunmetal gate pattern landing valve with flanged inlet and female instantaneous outlet fitted with plug secured by short chains and fixed on 100mm diameter dry riser pipe.	3	No		
D	Fire Hose 65mm diameter, 30 metres long canvas fire hose complete with branch pipe, nozzle, female instantaneous coupling head, hanging hook and other associated fittings for its proper functioning.	3	No		
E	Associated Pipework Supply and installation of Galvanized mild steel piping and fittings with screwed & socketed joint to medium grade class "B" to BS. 1387.				
F	GMS Pipework 100mm diameter pipe	28	Lm		
G	65mm diameter ditto	8	Lm		
H	50mm diameter ditto	8	Lm		
Extra over Pipework					
Bends/Elbows					
I	100mm diameter bends/elbows	3	No		
J	65mm diameter bends/elbows	3	No		
Total Carried Forward to Next Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total Carried Forward from previous Page					
	Tees				
A	100 x 100 x 100mm tee	3	No		
B	100 x 100 x 65mm tee	3	No		
C	100 x 100 x 50mm tee	3	No		
	Reducers				
D	100 x 65mm reducer	3	No		
E	100 x 50mm reducer	3	No		
	Valves				
F	65mm isolating valve with its associated unions	3	No		
G	65mm diameter flange	6	No		
H	50mm automatic air release valve	3	No		
	Testing and Commissioning				
I	Allow for testing and commissioning of the dry riser, Hosereel and portable fire extinguishers installations to the satisfaction of the Engineer.	1	Item		
Total Carried Forward to Collection page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<p>The air conditioning system shall be split type for Power Room.</p> <p>POWER ROOM HIGH WALL SPLIT AC</p> <p>24,000 BTU/HR(7.1KW) high wall remote controlled split air conditioner inclusive of wall mounted outdoor unit complete with purpose made protective steel angle iron frame support brackets with anti vibration mountings. The indoor unit shall have automatic air deflection dampers, a wireless remote control and should operate on R32a refrigerant or any other non ozone depleting refrigerant. The entire system shall be able to start automatically after power failure with a 3 minute delay. The unit shall be as LG or approved equivalent</p>				
A		1	No.		
B	Refrigeration liquid line pipework including 25mm Amaflex insulation.	15	Lm		
C	Refrigeration gas line pipework including 25mm Amaflex insulation.	15	Lm		
D	25mm pvc condensate drainage pipework	10	Lm		
E	Power protection units as Solartek or equal and approved	1	No.		
	<p>Electrical Works</p> <p>Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and from indoor unit to outdoor unit.</p>				
F		1	Item		
Sub Total for Power Room AC carried forward to next Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub Total for Power Room AC brought forward from previous Page					
A	Mounting Bracket Mounting bracket for the outdoor unit complete with a cage and provided with purpose-made protective steel iron angle frame and all other anchoring accessories including rawl bolts and anti-vibration rubber mountings to engineer's approval.	1	Item		
B	Trunking 75x50mm approved PVC trunking for concealing the refrigerant pipework.	15	LM		
C	Wall Mounted Wired Remote Controller Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	1	No.		
D	Testing and Commissioning Allow for testing and commissioning of the air conditioning system to the satisfaction of the Engineer.	1	Item		
Sub Total for Power Room AC carried forward to collection Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	The air conditioning system shall be split type for Board Room.				
	BOARD ROOM CEILING CASSETTE AC				
A	24,000 BTU/HR(7.1KW) ceiling cassette remote controlled split air conditioner inclusive of wall mounted outdoor unit complete with purpose made protective steel angle iron frame support brackets with anti vibration mountings. The indoor unit shall have fourway automatic air deflection dampers, a wireless remote control and should operate on R32a refrigerant or any other non ozone depleting refrigerant. The entire system shall be able to start automatically after power failure with a 3 minute delay. The unit shall be as LG or approved equivalent	2	No.		
B	Refrigeration liquid line pipework including 25mm Amaflex insulation.	45	Lm		
C	Refrigeration gas line pipework including 25mm Amaflex insulation.	45	Lm		
D	25mm pvc condensate drainage pipework	20	Lm		
E	Power protection units as Solartek or equal and approved	2	No.		
	Electrical Works				
F	Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and from indoor unit to outdoor unit.	1	Item		
Sub Total for BoardRoom AC carried forward to collection Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Mounting Bracket Mounting bracket for the outdoor unit complete with a cage and provided with purpose-made protective steel iron angle frame and all other anchoring accessories including rawl bolts and anti-vibration rubber mountings to engineer's approval.	2	Item		
B	Trunking 75x50mm approved PVC trunking for concealing the refrigerant pipework.	30	LM		
C	Wall Mounted Wired Remote Controller Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	2	No.		
D	Testing and Commissioning Allow for testing and commissioning of the air conditioning system to the satisfaction of the Engineer.	1	Item		
Sub Total for Board Room AC carried forward to collection Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
RAIN WATER DRAINAGE					
Supply and fix uPVC pipes to BS 4660 and BS 4515 and MuPVC pipes to BS 5255 with screwed and socketed joints to BS 21. Solvent welded joints shall be as per the system's manufacturer's written instructions.					
Tenderers must allow in their pipework prices for all the 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.					
Pipes					
A	100mm diameter heavy gauge grey mUPVC down pipes	480	Lm		
Bends					
B	100mm diameter 450 bend	30	No.		
C	100mm diameter bend	30	No.		
Tees					
D	100mm diameter tee	30	No.		
Others					
E	100mm diameter single branch with 50mm boss adaptor	30	No.		
F	100mm diameter cast iron fulbora	30	No.		
Total carried to next Page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total carried to next Page					
A	<p>Working and Record (As-installed) Drawings</p> <p>Prepare and submit three sets of working and record (as-installed) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows;</p> <p>i) general arrangement drawings of all equipment, plant etc. ii) routes - types and sizes and arrangement of all pipework iii) wiring (electrical & control) details iv) any other details as per specifications</p> <p>Drawings are to be submitted in soft copy (AutoCAD 2021 format) & hard copy to the client, the Architect and the Engineer. The soft copies to be stored in CD and 4GB flash disk. Allow for preparation & submitting draft and three final copies of operation, instruction and maintenance manuals to Engineer's approval.</p> <p><u>PROJECT MANAGER'S STATIONERY.</u></p> <p>The tenderer shall price for the following requirements. These shall then be delivered, upon their first demand to the office of the Chief Engineer Mechanical (BS) immediately after the award to the successful bidder</p>	1	Item		
B	Photocopy paper, size A4, 80g/cm ³ , White, 500 sheets	30	No		
C	Photocopy paper, size A4, 80g/cm ³ , Cream, 500 sheets	10	No		
D	Printer with print, scany and copy, WI-FI, Ethernet and USB as 'HP laserjet Pro MFP 4103fdw' or approved equivalent	1	No		
Total Carried to Collection Page for Rainwater Drainage					

COLLECTION PAGE		
Item	Description	Amount (Kshs)
1	Total for Laboratory works	
2	Total For Sanitary Fittings,Plumbing &Drainage	
3	Total for Fire Protection	
4	Total for Dry Riser	
5	Total for Air Conditioning for Power Room	
6	Total for Air Conditioning for Board room	
7	Total for Rainwater Drainage	
Total for Mechanical Works Third Floor		

SUMMARY PAGE		
Item	Description	Amount (Kshs)
1	Preliminaries	
2	Total for Third floor	
3	Contingency sum to be used at the discretion of the Engineer	650,000.00
Total cost of Mechanical Works		

Amount in words:

Contract Period:
.....

Tenderer's Name and Stamp
.....

Signature: **Date**

(Provide Copy) (Provide Copy)

Witness: **Address**

Signature: **Date**

Witness Address:

.....

Date: **Signature:**.....

SECTION F
GENERAL SPECIFICATONS
OF
MATERIALS AND WORKS

GENERAL MECHANICAL SPECIFICATION

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
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2.02	QUALITY OF MATERIALS	F-2
2.03	REGULATIONS AND STANDARDS	F-2
2.04	ELECTRICAL REQUIREMENTS	F-3
2.05	TRANSPORT AND STORAGE	F-3
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2.10	WELDING	F-

GENERAL MECHANICAL SPECIFICATION

2.01 **General**

This section specifies the general requirement for plant, equipment and materials forming part of the Sub-contract Works and shall apply except where specifically stated elsewhere in the Specification or on the Contract Drawings.

2.02 **Quality of Materials**

All plant, equipment and materials supplied as part of the Sub-contract Works shall be new and of first class commercial quality, shall be free from defects and imperfections and where indicated shall be of grades and classifications designated herein.

All products or materials not manufactured by the Sub-contractor shall be products of reputable manufacturers and so far as the provisions of the Specification is concerned shall be as if they had been manufactured by the Sub-contractor.

Materials and apparatus required for the complete installation as called for by the Specification and Contract Drawings shall be supplied by the Sub-contractor unless mention is made otherwise.

Materials and apparatus supplied by others for installation and connection by the Sub-contractor shall be carefully examined on receipt. Should any defects be noted, the Sub-contractor shall immediately notify the Engineer.

Defective equipment or that damaged in the course of installation or tests shall be replaced as required to the approval of the Engineer.

2.03 **Regulations and Standards**

The Sub-contract Works shall comply with the current editions of the following:

- a) The Kenya Government Regulations.
- a) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
- b) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.
- c) British Standard and Codes of Practice as published by the British Standards Institution (BSI)
- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

2.04 **Electrical Requirements**

Plant and equipment supplied under this Sub-contract shall be complete with all necessary motor starters, control boards, and other control apparatus. Where control panels incorporating several starters are supplied they shall be complete with a main isolator.

The supply power up to and including local isolators shall be provided and installed by the Electrical Sub-contractor. All other wiring and connections to equipment shall form part of this Sub-contract and be the responsibility of the Sub-contractor.

The Sub-contractor shall supply three copies of all schematic, cabling and wiring diagrams for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents described in the Kenya Power and Lighting Company (KPLC) By-laws.

All electrical plant and equipment supplied by the Sub-contractor shall be rated for the supply voltage and frequency obtained in Kenya, that is 415 Volts, 50Hz, 3-Phase or 240Volts, 50Hz, 1-phase.

Any equipment that is not rated for the above voltages and frequencies shall be rejected by the Engineer.

2.05 **Transport and Storage**

All plant and equipment shall, during transportation be suitably packed, crated and protected to minimise the possibility of damage and to prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation.

Adequate measures shall be taken by the Sub-contractor to ensure that plant and equipment do not suffer any deterioration during storage.

Prior to installation all piping and equipment shall be thoroughly cleaned.

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the Sub-contractor shall replace this equipment at his own cost.

2.06 **Site Supervision**

The Sub-contractor shall ensure that there is an English-speaking supervisor on the site at all times during normal working hours.

2.07 **Installation**

Installation of all special plant and equipment shall be carried out by the Sub-contractor under adequate supervision from skilled staff provided by the plant and equipment manufacturer or his appointed agent in accordance with the best standards of modern practice and to the relevant regulations and standards described under Clause 2.03 of this Section.

2.08 **Testing**

2.08.1 **General**

The Sub-contractor's attention is drawn to Part 'C' Clause 1.38 of the "Preliminaries and General Conditions".

2.08.2 **Material Tests**

All material for plant and equipment to be installed under this Sub-contract shall be tested, unless otherwise directed, in accordance with the relevant B.S Specification concerned.

For materials where no B.S. Specification exists, tests are to be made in accordance with the best modern commercial methods to the approval of the Engineer, having regard to the particular type of the materials concerned.

The Sub-contractor shall prepare specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

If stock material, which has not been specially manufactured for the plant and equipment specified is used, then the Sub-contractor shall submit satisfactory evidence to the Engineer that such materials conform to the requirements stated herein in which case tests of material may be partially or completely waived.

Certified mill test reports of plates, piping and other materials shall be deemed acceptable.

2.08.3 **Manufactured Plant and Equipment – Work Tests**

The rights of the Engineer relating to the inspection, examination and testing of plant and equipment during manufacture shall be applicable to the Insurance Companies or Inspection Authorities so nominated by the Engineer.

The Sub-contractor shall give two week's notice to the Engineer of the manufacturer's intention to carry out such tests and inspections.

The Engineer or his representative shall be entitled to witness such tests and inspections. The cost of such tests and inspections shall be borne by the Sub-contractor.

Six copies of all test and inspection certificates and performance graphs shall be submitted to the Engineer for his approval as soon as possible after the completion of such tests and inspections.

Plant and equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Sub-contractor's own risk and should the test and inspection certificates not be approved, new tests may be ordered by the Engineer at the Sub-contractor's expense.

2.08.4 Pressure Testing

All pipe work installations shall be pressure tested in accordance with the requirements of the various sections of this Specification. The installations may be tested in sections to suit the progress of the works but all tests must be carried out before the work is buried or concealed behind building finishes. All tests must be witnessed by the Engineer or his representative and the Sub-contractor shall give 48 hours notice to the Engineer of his intention to carry out such tests.

Any pipe work that is buried or concealed before witnessed pressure tests have been carried out shall be exposed at the expense of the Sub-contractor and the specified tests shall then be applied.

The Sub-contractor shall prepare test certificates for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

2.09 **Colour Coding**

Unless stated otherwise in the Particular Specification all pipe work shall be color coded in accordance with the latest edition of B.S 1710 and to the approval of the Engineer or Architect.

2.10 **Welding**

2.10.1 Preparation

Joints to be made by welding shall be accurately cut to size with edges sheared, flame cut or machined to suit the required type of joint. The prepared surface shall be free from all visible defects such as lamination, surface imperfection due to shearing or flame cutting operation, etc., and shall be free from rust scale, grease and other foreign matter.

2.10.2 Method

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with B.S. 639.

Gas welding may be employed in certain circumstances provided that prior approval is obtained from the Engineer.

2.10.3 Welding Code and Construction

All welded joints shall be carried out in accordance with the following Specifications:

a) Pipe Welding

All pipe welds shall be carried out in accordance with the requirements of B.S.806.

b) General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of B.S. 1856.

2.10.4 Welders Qualifications

Any welder employed on this Sub-contractor shall have passed the trade tests as laid down by the Government of Kenya.

The Engineer may require to see the appropriate to see the appropriate certificate obtained by any welder and should it be proved that the welder does not have the necessary qualifications the Engineer may instruct the Sub- contractor to replace him by a qualified welder.

SECTION G
PARTICULAR SPECIFICATIONS OF MATERIAL
AND WORKS

PARTICULAR PLUMBING & DRAINAGE AND FIRE PROTECTION SPECIFICATIONS

1. SITE LOCATION

The site of the proposed works is at **Gatundu**

2. SCOPE OF WORKS

The works to be carried out under this sub-contract comprise supply, installation, testing and commissioning of the following: -

- a) Plumbing and Drainage**
- b) Fire Protection**
- c) Air Conditioning**
- d) Laboratory**

3. MATERIALS FOR THE WORKS

Materials shall be as specified in Section E and in the Bills of Quantities of this document which shall be read in conjunction with contract drawings. Alternative materials shall be accepted only after approval by the Project Manager.

4. BROCHURES FOR DEVICES

For consideration and qualification tenderers shall, at their own cost, provide coloured manufacturer's brochures detailing technical literature and specifications where applicable

5. MANDATORY REQUIREMENTS

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a, 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge.
- D. All systems and components shall be provided with a one-day turn around repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and non-warranty items.
- E. The supplier shall be the manufacturer, or the manufacturer appointed agent (proof to be submitted).

The Offered system has been installed and commissioned by the supplier in other locations.

6. WORKING DRAWINGS

The Contractor shall submit to the Project Manager working drawings for the proposed Plumbing and Drainage and Fire Protection supply for approval

3.1 **GENERAL**

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

3.2 **MATERIALS AND STANDARDS**

3.2.1 **Pipework and Fittings**

Pipework materials are to be used as follows:

a) **Galvanized Steel Pipework**

Galvanized steel pipe work up to 65mm nominal bore shall be manufactured in accordance with B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with B.S. 143.

Pipe joints shall be screwed and socketed and sufficient coupling unions shall be allowed so that fittings can be disconnected without cutting the pipe. Running nipples and long screws shall not be permitted unless exceptionally approved by the Engineer.

Galvanized steel pipe work, 80mm nominal bore up to 150mm nominal bore shall be manufactured to comply in all respects with the specification for 65mm pipe, except that screwed and bolted flanges shall replace unions and couplings for the jointing of pipes to valves and other items of plant. All flanges shall comply with the requirements of B.S. 10 to the relevant classifications contained hereinafter under Section 'C' of the Specification.

Galvanizing shall be carried out in accordance with the requirements of B.S. 1387 and B.S. 143 respectively.

b) **Copper Tubing**

All copper tubing shall be manufactured in accordance with B.S. 2871 from C.160 'Phosphorous De-oxidized Non-Arsenical Copper' in accordance with B.S. 1172.

Pipe joints shall be made with soldered capillary fittings and connections to equipment shall be with compression fittings manufactured in accordance with B.S. 864.

Short copper connection tubes between galvanized pipe work and sanitary fittings shall not be used because of the risk of galvanic action.

If, as may occur in certain circumstances, it is not possible to make the connection in any way than the use of copper tubing, then a brass straight connector shall be positioned between the galvanized pipe and the copper tube in order to prevent direct contact.

c) **P.V.C. (Hard) Pressure Pipes and Fittings**

All P.V.C. pipes and fittings shall be manufactured in accordance with B.S. 3505: 1968.

Jointing

The method of jointing to be employed shall be that of solvent welding, using the pipe and manufacturer's approved cement. Seal ring joint shall be introduced where it is necessary to accommodate thermal expansion.

Testing

Pipelines shall be tested in sections under an internal water pressure normally one and a half times the maximum allowable working pressure of the class of pipe used. Testing shall be carried out as soon as practical after laying and when the pipeline is adequately anchored. Precautions shall be taken to eliminate all air from the test section and to fill the pipe slowly to avoid risk of damage due to surge.

d) **A.B.S. Waste System**

Where indicated on the Drawings and Schedules, the Sub-contractor shall supply and fix A.B.S. waste pipes and fittings.

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding, the manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding. The manufacturer's recommended method of joint preparation and fixing shall be followed.

Standard brackets, as supplied for use with this system, shall be used wherever possible. Where the building structure renders this impracticable the Sub-contractor shall provide purpose made supports, centers of which shall not exceed one meter.

Expansion joints shall be provided as indicated. Supporting brackets and pipe clips shall be fixed on each side of these joints.

e) **PVC Soil System**

The Sub-contractor shall supply and fix PVC soil pipes and fittings as indicated on the Drawings and Schedules.

Pipes and fittings shall be in accordance with relevant British Standards, including B.S. 4514 and fixed to the manufacturer's instructions and B.S. 5572.

The soil system shall incorporate synthetic rubber gaskets as provided by the manufacturer whose fixing instructions shall be strictly adhere to.

Connections to WC pans shall be effected by the use of a WC connector, gasket and cover, fixed to suit pan outlet.

Suitable supporting brackets and pipe clips shall be provided at maximum of one metre centres.

The Sub-contractor shall be responsible for the joint into the Gully Trap on Drain as indicated on the Drawings.

3.2.2 **Valves**

a) **Draw-off Taps and Stop Valves (Up to 50mm Nominal Bore)**

Draw-off taps and valves up to 50mm nominal bore, unless otherwise stated or specified for attachment or connection to sanitary fitment shall be manufactured in accordance with the requirements of B.S.1010.

b) **Gate Valves**

All gate valves 80mm nominal bore and above, other than those required for fitting to buried water mains shall be of cast iron construction, in accordance with the requirements of B.S. 3464. All gate valves required for fitting to buried water mains shall be of cast iron construction in accordance with the requirements of B.S.1218.

All gate valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S. 1952.

The pressure classification of all valves shall depend upon the pressure conditions pertaining to the site of works.

c) Globe Valves

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the site of works.

3.2.3 **Waste Fitment Traps**

a) Standard and Deep Seal P & S Traps

Where standard or deep seal traps are specified they shall be manufactured in suitable non-ferrous materials in accordance with the full requirements of B.S. 1184.

In certain circumstances, cast iron traps may be required for cast iron baths and in these instances bath traps shall be provided which are manufactured in accordance with the full requirements of B.S.1291.

b) Anti-Syphon Traps

Where anti-syphon traps are specified, these shall be similar or equal to the range of traps manufactured by Greenwood and Hughes Limited, Deacon Works Littlehampton, Sussex, England.

The trade name for traps manufactured by this company is 'Grevak'.

3.2.4 **Pipe Supports**

a) General

This sub-clause deals with pipe supports securing pipes to the structure of buildings for above ground application.

The variety and type of support shall be kept to a minimum and their design shall be such as to facilitate quick and secure fixings to metal, concrete, masonry or wood.

Consideration shall be given, when designing supports, to the maintenance of desired pipe falls and the restraining of pipe movements to a longitudinal axial direction only.

The Sub-contractor shall supply and install all steelwork forming part of the pipe support assemblies and shall be responsible for making good damage to builders work associated with the pipe support installation.

The Sub-contractor shall submit all his proposals for pipe supports to the Engineer for approval before any erection works commence.

b) Steel and Copper Pipes and Tubes

Pipe runs shall be secured by clips connected to pipe angers, wall brackets, or trapeze type supports. 'U' bolts shall not be used as a substitute for pipe clips without the prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in metres for steel and copper pipe and tube is given in the following table for horizontal runs.

Size Nominal Bores	Copper Tube to B.S. 659	Steel Tube to B.S. 1387
15mm	1.25m	2.0m
20mm	2.0m	2.5m
25mm	2.0m	2.5m
32mm	2.5m	3.0m
40mm	2.5m	3.0m
50mm	2.5m	3.0m
65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

The support spacing for vertical runs shall not exceed one and a half times the distances given for horizontal runs.

c) Expansion Joints and Anchors

Where practicable, cold pipework systems shall be arranged with sufficient bends and changes of direction to absorb pipe expansion providing that the pipe stresses are contained within the working limits prescribed in the relevant B.S. specification.

Where piping anchors are supplied, they shall be fixed to the main structure only. Details of all anchor design proposals shall be submitted to the Engineer for approval before erection commences.

The Sub-contractor when arranging his piping shall ensure that no expansion movements are transmitted directly to connections and flanges on pumps or other items of plant.

The Sub-contractor shall supply flexible joints to prevent vibrations and other movements being transmitted from pumps to piping systems or vice versa.

3.2.5 Sanitary Appliances

All sanitary appliances supplied and installed as part of the Sub-contract works shall comply with the general requirements of B.S. Code of Practice 305 and the particular requirements of the latest B.S. Specifications.

3.2.6 Pipe Sleeves

Main runs of pipework are to be fitted with sleeves where they pass through walls and floors. Generally the sleeves shall be of P.V.C. except where they pass through the structure, where they shall be mild steel. The sleeves shall have 6mm – 12mm clearance all around the pipe or for insulated pipework all around the installation. The sleeve will then be packed with slag wool or similar.

3.3 INSTALLATION

3.3.1 General

Installation of all pipework, valves, fittings and equipment shall be carried out under adequate supervision from skilled staff to the relevant codes and standards as specified herein. The Sub-contractor shall be responsible to the Main Contractor for ensuring that all builders work associated with his piping installation is carried out in a satisfactory manner to the approval of the Engineer.

3.3.2 Above Ground Installation

a) Water Services

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the Contract Drawings or stated elsewhere in the Specification, pipework shall be installed parallel to the lines of the buildings and as close to the walls, ceilings, columns, etc., as is practicable.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly.

Valves and other user equipment shall be installed with adequate access for operation and maintenance. Where valves and other operational equipment are unavoidably installed beyond normal reach or in such position as to be difficult to reach from a small step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of pipework to be carried out without the need to cut the pipe.

Full allowances shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any force produced by the pipe movements are not transmitted to valves, equipment or plant.

All screwed joints to piping and fittings shall be made with P.T.F.E. tape.

The test pressure shall be maintained by the pump for about one hour and if there is any leakage, it shall be measured by the quantity of water pumped into the main in that time. A general leakage of 4.5 litres per 25mm of diameter, per 1.6 kilometres per 24 hours per 30 metres head, may be considered reasonable but any visible individual leak shall be repaired.

b) Sanitary Services

Soil, waste and vent pipe system shall be installed in accordance with the best standard of modern practice as described in B.S. 5572 to the approval of the Engineer.

The Sub-contractor shall be responsible for ensuring that all ground waste fittings are discharged to a gully trap before passing to the sewer via a manhole.

The Sub-contractor shall provide all necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

Where a branch requires rodding facilities in a position to which normal access is unobtainable, then that branch shall be extended so as to provide a suitable purpose made rodding eye in the nearest adjacent wall or floor to which easy access is available.

The vent stacks shall terminate above roof level and where stack passes through roof, a weather skirt shall be provided. The Sub-contractor shall be responsible for sealing the roof after installation of the stacks.

The open end of each stack shall be fitted with a plastic coated or galvanised steel wire guard.

Access for rodding and testing shall be provided at the foot of each stack.

c) Sanitary Appliances

All sanitary appliances associated with the Sub-contract works shall be installed in accordance with the best standard of modern practice as described in C.P. 305 to the approval of the Engineer.

1.1. **TESTING AND INSPECTION**

3.4.1 **Site Tests – Pipework Systems**

a) Above Ground Internal Water Services Installation

All water service pipe system installed above ground shall be tested hydraulically for a period of one hour to not less than one and half times to design working pressure.

If preferred, the Sub-contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects revealed shall be made good by the Sub-contractor and the section re-tested.

The Sub-contractor shall take all necessary precautions to prevent damage occurring to special valves and fittings during the tests. Any item damaged shall be repaired or replaced at the Sub-contractor's expenses.

b) Above Ground Soil Waste and Ventilation System

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.

Smoke tests on above ground soil, waste and ventilating pipe system shall not be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

In all respects, tests shall comply with the requirements of B.S. 5572.

3.4.2 **Site Test – Performance**

Following satisfactory pressure test on the pipework system operational tests shall be carried out in accordance with the relevant B. S. Code of practice on the systems as a whole to establish that special valves, gauges, control, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

All hot water pipework shall be installed with pre-formed fibre glass lagging to a thickness of 25mm where the pipe runs above a false ceiling or in areas where the ambient temperature is higher than normal with the result that pipe “sweating”, due to condensation will cause nuisance.

All lagged pipes which run in a visible position after erection shall be given a canvas cover and prepared for painting as follows

- i) Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- ii) Apply two coats of an approved paint and finish in suitable gloss enamel to colors approved by the Engineer.

All lagging for cold and hot water pipes erected in crawlways, ducts and above false ceiling which after erection are not visible from the corridors of rooms, shall be covered with a reinforced aluminium foil finish banded in colours to be approved by the Engineer.

In all respects, unless otherwise stated, the hot and cold water installation shall be carried out in accordance with the best standard of modern practice and described in C.P.342 and C.P.310 respectively to the approval of the Engineer.

The test pressure shall be applied by means of a manually operated test pump or, in the case of long main or mains of large diameter, by a power driven test pump which shall not be left unattended. In either case precautions shall be taken to ensure that the required pressure is not exceeded.

Pressure gauges should be recalibrated before the tests.

The Sub-contractor shall be deemed to have included in his price for all test pumps, and other equipment required under this specification.

The test pressure shall be one and a half times the maximum working pressure except where a pipe is manufactured from a material for which the relevant B.S. specification designates a maximum test pressure.

3.5 **STERILISATION OF COLD WATER SYSTEM**

All water distribution system shall be thoroughly sterilised and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilisation procedures shall be carried out by the Sub-contractor in accordance with the requirements of B.S. Code of Practice 301, Clause 409 and to the approval of the Engineer.

PARTICULAR SPECIFICATIONS FOR PORTABLE FIRE EXTINGUISHER AND HOSE REEL INSTALLATIONS

6.1 GENERAL

The particular specification details the requirements for the supply and installation and commissioning of the Portable Fire Extinguishers and Boosted Hose Reel System. The Sub-contractor shall include for all appurtenances and appliances not necessarily called for in this specification or shown on the contract drawings but which are necessary for the completion and satisfactory functioning of the works.

If in the opinion of the Sub-contractor there is a difference between the requirements of the Specifications and the Contract Drawings, he shall clarify these differences with the Engineer before tendering.

6.2 SCOPE OF WORKS

The Sub-contractor shall supply, deliver, erect, test and commission all the portable fire extinguishers and Hose Reel which are called for in these Specifications and as shown on the Contract Drawings.

6.3 WATER/CO2 EXTINGUISHERS

These shall be 9-litre water filled CO2 cartridge operated portable fire extinguishers and shall comply with B.S. 1382: 1948 and to the requirements of B.S.4523: 1977. Unless manufactured with stainless steel, bodies shall have all internal surfaces completely coated with either a lead tin, lead alloy or zinc applied by hot dipping. There shall be no visibly uncoated areas.

The extinguishers shall be clearly marked with the following:

- a) Method of operation.
- b) The words 'WATER TYPE' (GAS PRESSURE) in prominent letters.
- c) Name and address of the manufacturer or responsible vendor.
- d) The nominal charge of the liquid in imperial gallons and litres.
- e) The liquid level to which the extinguisher is to be charged.
- f) The year of manufacture.

- g) A declaration to the effect that the extinguisher has been tested to a pressure of 24.1 bar (350 psi).
- h) The number of British Standard 'B.S' 1382 or B.S. 5423: 1977.

6.4 PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

These shall be portable carbon dioxide fire extinguishers and shall comply with B.S. 3326: 1960 and B.S. 5423: 1977.

The body of extinguisher shall be a seamless steel cylinder manufactured to one of the following British Standards; B.S. 401 or B.S. 1288.

The filling ratio shall comply with B.S. 5355 with valves fittings for compressed gas cylinders to B.S.341. Where a hose is fitted it shall be flexible and have a minimum working pressure of

206.85 bar (3000 p.s.i.). The hose is not to be under internal pressure until the extinguisher is operated.

The nozzle shall be manufactured of brass gunmetal, aluminium or stainless steel and may be fitted with a suitable valve for temporarily stopping the discharge if such means are not incorporated in the operating head.

The discharge horn shall be designed and constructed so as to direct the discharge and limit the entrainment of air. It shall be constructed of electrically non-conductive material.

The following markings shall be applied to the extinguishers:-

- a) The words "Carbon Dioxide Fire Extinguisher" and to include the appropriate nominal gas content.
- b) Method of operation.
- c) The words "Re-charge immediately after use".
- d) Instructions for periodic checking.
- e) The number of the British Standard B.S. 3326: 1960 or B.S. 5423.
- f) The manufacturers name or identification

DRY CHEMICAL POWDER PORTABLE FIRE EXTINGUISHER

The portable dry powder fire extinguishers shall comply with BS3465: 1962 and BS 5423. The body shall be constructed to steel not less than the requirements of BS 1449 or aluminium to BS 1470 : 1972 and shall be suitably protected against corrosion.

The dry powder charge shall be not-toxic and retain its free flowing properties under normal storage conditions. Any pressurizing agent used as an expellant shall be in dry state; in particular compressed air.

The discharge tube and gas tube if either is fitted shall be made of steel, brass, copper or other not less suitable material. Where a hose is provided it shall not exceed 1,060mm and shall be acid and alkali resistant. Provision shall be made for securing the nozzle when not in use.

The extinguisher shall be clearly marked with the following information

- a) The word "Dry Powder Fire Extinguisher"
- b) Method of operation in prominent letters.
- c) The working pressure and the weight of the powder charge in Kilogramme.
- d) Manufacturers name or identification mark
- e) The words "RECHARGE AFTER USE" if rechargeable type.
- f) Instructions to regularly check the weight of the pressure container (gas Cartridge) or inspect the pressure indicator on stored pressure types when fitted, and remedy any loss indicated by either.
- g) The year of manufacture.
- h) The Pressure to which the extinguisher was tested.
- i) The number of this British Standard BS 3465 or BS 5423: 1977.
- j) When appropriate complete instructions for charging the extinguisher shall be clearly marked on the extinguisher or otherwise be supplied with the refill.

6.7 BOOSTED HOSE REEL SYSTEM

6.7.1 General

The Particular Specification details the requirements for the supply, installation and commissioning of the hose reel installation. The hose reel installation shall comply in all respects to the requirements set out in C.O.P 5306 Part 1: 1976, B.S 5041 and B.S 5274. The System shall comprise of a pumped system.

6.7.2 Hose Reel Pumps

The fire hose reel pumps shall consist of a duplicate set of multi-line centrifugal pumps from approved manufacturers. The pumps shall be capable of delivering 2.1 lit/sec at a running pressure of 2 bars.

The pump casing shall be of cast iron construction with the impeller shaft of stainless steel with mechanical seal.

6.8.1 Control Panel

The control panel shall be constructed of mild steel 1.0mm thick sheet, be moisture, insect and rodent proof and shall be provided complete with circuit breakers and a wiring diagram enclosed in plastic laminate.

The pump shall be controlled by a flow switch therefore, the control panel shall include the following facilities:

- (a) 'On' push button for setting the control panel to live.
- (b) Green indicator light for indicating control panel live.
- (c) Duty / Stand-by pump auto change over.
- (d) Duty pump run green indicator light.
- (e) Stand-by pump run green indicator light.
- (f) Duty pump fail red indicator light.
- (g) Stand-by pump fail red indicator light.

(h) Low water condition pump cut-out with red indicator light.

The pumps are to be protected by a low level cut-out switch to prevent dry pump run when low level water conditions occur in the water storage tank.

6.8.2 Hose Reel

The hose reel to the installation shall consist of a recessed, swing-type hose reel as Angus Fire Armour Model III or from other approved manufacturers.

The hose reel shall comply with B.S. 5274: 1975 and B.S 3161: 1970 and is to be installed to the requirements of C.P. 5306 Part 1: 1976.

The hose reel shall be supplied and installed complete with a first-aid Non-kinking hose 30 meters long with a nylon spray / jet / shut-off nozzle fitted. A screw down chrome - plated globe valve to B.S 1010 to the inlet to the reel is to be supplied.

The orifice to the nozzle is to be not less than 4.8mm to maintain a minimum flow of 0.4 lit / sec to jet.

The hose reels shall be installed complete with electro-galvanised cabinet recessed on the wall.

The hose reels shall be installed at 1.5 metres centre above the finished floor level in locations shown in the contract drawings.

6.8.3 Pipe Work

The pipe work for the hose reel installation shall be galvanised wrought steel tubing heavy grade Class C to B.S 1387: 1967 with pipe threads to B.S 21. The pipe work and all associated fittings shall be in approved colour for fire fittings.

6.8.4 Pipe Fittings

The pipe fittings shall be wrought steel pipe fittings, welded or seamless fittings conforming to B.S. 1740 or malleable iron fittings to B.S 143.

All changes in direction will be with standard bends or long radius fittings. No elbows will be provided.

6.8.5 Non-return Valves

The non-return valves up to and including 80mm diameter shall be to B.S. 5153: 1974.

The valves shall be of cast iron construction with gunmetal seat and bronze hinge pin.

6.8.6 Gate Valves

The gate valves up to and including 80mm diameter shall be non-rising stem and wedge disc to B.S 5154: 1974 with screwed threads to B.S. 21 tapes thread

6.8.7 Sleeves

Where pipe work passes through walls, floors or ceilings, a sleeve shall be provided one diameter larger than the diameter of the pipe, the space between them to be packed with mineral wool, to the Engineer's approval.

6.8.8 Earthing

The hose reel installation shall be electrically earthed by a direct earth connection. The installation of the earthing shall be carried out by the Electrical Sub- contractor.

6.8.9 Finish Painting

Upon completion of testing and commissioning the hose reel installation, the pipework shall be primed and finish painted with 2 No. coats of paints to the Engineer's requirements.

6.8.10 Testing and Commissioning

The hose reel installation shall be flushed out before testing to ensure that no builder's debris has entered the system. The installation is to be then tested to one and half times the working pressure of the installation to the approval of the Engineer. Simulated fault conditions of the pumping equipment are to be carried out before acceptance of the System by the Engineer.

6.8.11 Instruction Period

The Sub-contractor shall allow in his contract sum for instructing of the use of the equipment to the Client's maintenance staff. The period of instruction may be within the contract period but may also be required after the contract period has expired.

The period of time required shall be stipulated by the Client but will not exceed two days in which time the Client's staff shall be instructed on the operation and maintenance of the equipment.

Signage-Fire Instruction /Fire Exit

6.8.11.1 Fire Instruction Notice

Print fire instruction on the Perspex plates with White Colour

Background measuring 510mm length x 380mm width x 4mm thick as follows;

FIRE INSTRUCTION NOTICE

In the event of fire;

1. Raise the alarm by actuating the nearest alarm system point,
Sound Siren /gong or **Shout Fire**
2. Attack fire using the nearest available equipment
3. Call nearest fire Brigade or Police 999 and inform your
switchboard (PABX) Operator
4. Ensure that all personnel not involved in fire fighting evacuation
to safety outside the building.
5. Close but **DO NOT LOCK** doors behind as you leave.
6. Evacuate the building using stairs or fire escapes. Do not use
Lifts/escalators. Walk calmly. Avoid panic. Do not stop or return
for personal belongings.
7. Assemble as per floor outside the building for roll call.

6.8.11.2 Fire Exit Sign

Print Fire Exit signs on the Perspex plate, 4mm thick, with white colour background as follows:-

1. Lettering **IN RED COLOUR** of not less than 50mm in height.
2. A pendant sign bearing words, **FIRE EXIT** and with a directional arrow.

The sign must be capable of being read from both approaches to exit and so is double sided.

6.8.11.3 Hose Reel Label

Print Fire Exit signs on the Perspex plate, 4mm thick, with white colour background as follows:-

1. Lettering **IN RED COLOUR** of not less than 50mm in height.
2. A pendant sign bearing words, **HOSE REEL** and with a directional arrow.

The sign must be capable of being read from both approaches to exit and so is double sided.

PARTICULAR SPECIFICATIONS FOR AIR CONDITIONING SYSTEMS

SCOPE OF WORKS

The works to be carried out comprises of the supply, delivery, installation, setting to work, testing and commissioning of all materials and equipment called for in this specification and/or shown in the contract drawings.

The tenderer shall include for all appurtenances and appliances not particularly called for in this specification or on the contract drawings but which are necessary for the completion and satisfactory functioning of the system.

No claim for extra payment shall be accepted from the contractor for non-compliance with the above requirements.

If in the opinion of the tenderer there exists difference between the specification and the contract drawings, the tenderer shall clarify the difference with the engineer before tendering.

The Works to be installed under the contract shall comply with the State Department of Public Works requirements for contract works under “GENERAL MECHANICAL SPECIFICATION”.

CLIMATIC CONDITIONS

The following climatic conditions apply at the sites of the works and all materials and equipment used shall be suitable for these conditions:-

PARAMETERS	(CONDITIONS) GATUNDU
Maximum mean outdoor dry bulb Temperature, to	26 °C
Minimum Temperature	10°C
Relative Humidity	41% - 95%
Altitude	1795m ASL
Longitude	1° S
Latitude	36° 54'E
Max. solar radiation occurs during the month of March	

SYSTEMS DESIGN DATA

The air-conditioning systems are designed to maintain the following internal conditions with ambient conditions of 26°C DB and 75% RH

Internal Temperature	23 ± 1°C
Relative Humidity	50± 10%

The equipment described here under covers the specific requirements of equipment to be used for this contractor work and shall be used in conjunction with the accompanying contract drawings.

It shall be deemed that the tenderer has based his tender on plant and equipment which is equal in performance to that stated within the specification.

SPLIT AIR CONDITIONING SYSTEM

This shall be installed in the

The system shall be complete with;

Indoor wall mounted cooling unit and Ceiling Mounted (Evaporator)

Each coil unit shall consist of a cooling coil, air circulating fan, fan-guard and a thermostatic expansion valve. A timer unit shall be mounted in the control panel to both the de-frosting intervals and defrosting periods, both of which shall be variable.

The evaporator unit shall be of capacity as specified under the specified conditions, and shall be of the dry expansion type, and preferably of similar make as that of the condensing units. The unit shall be cassette type, high wall mounted or ceiling mounted as will be specified by the Engineer.

The coil shall be manufactured from seamless copper tubing with aluminium fins mechanically bonded to the tubes.

The panel shall be interlocked such, that on energizing the heater, the compressor, condenser and evaporator fan shall be de-energized and only re-energized when the heater is switched off by a evaporator mounted thermostat. A manual overriding switch shall by-pass the timer switch.

The air-circulating fan shall be manufactured from rigid aluminium sheet and finished in white casing. A drip tray with 25mm diameter connections shall be incorporated in the base of the casing.

The Unit shall be complete with the following:

- 1 No. air purifying filter.
- Built in drain pump to automatically drain water.
- Refrigeration pipe work with flared connections
- Fixing brackets/wall mounting kit/ground mounting kit
- Thermostat to control room temperature
- High and low pressure units
- Condensate discharge pipe work in Black PVC, 15mm diameter
- Service access valves
- Voltage Surge Protector

The system shall be suitable for 240V, 1 – Phase, 50Hz power supply

The split air-conditioning system shall be designed to maintain room inside temperature of $23\pm 1^{\circ}\text{C}$ and relative humidity of $50\pm 10\%$.

Outdoor Units.

The outdoor units shall be installed and mounted on the wall using appropriate and approved mounting brackets.

They shall be complete with hermetically sealed compressors. Safety devices shall include overload/surge protection among others.

The unit shall be connected to power provided by others. It shall also be connected to refrigerant piping and control wiring. It shall have adequate charge of refrigerator oil and R 407 refrigerant.

The air conditioning units shall be as York or approved equivalent and shall be provided with approved mounting brackets.

The Unit shall be complete with the following:

- Casing constructed of 18 gauge zinc coated mild steel, zinc phosphate bonderized, coated with oven baked polyester paint and weatherized for outdoor installation. It shall have weep holes on base to allow ease of drainage.
- Hermetically sealed compressor mounted to unit base with rubber isolated hold down bolts, uniform in oil & pressures and shall have internal overload protection.
- Refrigeration pipe work with flared connections
- Distributor with refrigeration control
- Fixing brackets/wall mounting kit/ceiling mounting kit
- Heat exchanger capacity controls
- Precise inverter frequency controls
- New oil returning system (refrigerant oil control system)
- High and low pressure units
- An innovation of installation with automatic address settings for indoor units with twin multiplex transmission system of no polarity.
- Condensate discharge pipe work
- Service access valves
- Voltage Surge Protector

Refrigeration Piping

Refrigerant pipe work shall be approved copper tubing and fittings, and shall be properly sized in conformity with the system manufacturer specifications. Pipework shall be joined together by soldering/brazing and shall be complete with all necessary joints, reducers and accessories.

The Ozone friendly refrigerant flow shall be controlled with either a capillary tube or thermostatic expansion valve. Installation shall be carried out by competent and qualified craftsmen. The Engineer may demand proof of qualifications and experience in installation of refrigeration systems.

Pipe work shall be tested for leaks after installation to the Engineers satisfaction. It shall be properly anchored, insulated and no vibration of pipes shall be allowed during the running of the systems. An electronic leak detector shall be used to test for leaks.

As-Built-Drawings and maintenance manuals

Once the air conditioning system has been tested and commissioned, drawings and maintenance manuals shall be provided. They shall be a true and accurate representation of what has been commissioned.

Training

Adequate personnel shall be trained to perform normal operations and routine maintenance of the air conditioning system. The number of personnel to be trained shall be specified for particular pool.

TESTING & COMMISSIONING

All the pipe work and connections herein described shall be tested in the presence of the Engineer and to the hydraulic pressure the Engineer deems satisfactory and for a minimum period of 1 hour.

These tests must be before any insulation work is undertaken or any pipe work is finally enclosed in any ducts, etc and due allowance is to be made in the tender for these tests.

The tenderer is to include for providing for all the testing equipment, temporary plugging and refilling etc

ELECTRICAL WORKS

The tenderer shall include for supply, installation and commissioning of all starters, control apparatus, control panels and interconnecting wiring and conduits for equipment that the tenderer is supplying.

Power points shall be provided within 5 metres of the equipment installation point and the tenderer shall connect his equipment from this point.

BUILDERS WORKS

The tenderers shall allow for perforation of holes, hacking of walls etc. All disturbed surfaces shall thereafter be made good by the tenderer upon satisfactory completion of the works.

GENERAL SPECIFICATION

FOR

L.P. GAS INSTALLATIONS

GENERAL SPECIFICATION FOR L.P. GAS INSTALLATIONS

A GENERAL

The specification covers the storage and transmission of liquefied petroleum gas (L.P.G) which refers to butane, propane or a mixture of both stored in liquid form under pressure. When mixed with air at atmospheric pressure, the gas requires a concentration of 2% of the vapour for ignition to take place. The percentage fill in the storage vessel is about 85%.

B REGULATIONS AND STANDARDS

Material, equipment, installations and workmanship shall comply with the requirements of the latest Editions of the following:

- (a) Kenya Government By-laws.
- (b) Relevant standards published by the Kenya Bureau of Standards.
- (c) Relevant British Standards, Specifications & Codes of Practice; referred to as B.S.&B.S.C.P respectively in this document.
- (d) Requirements of the clients proposed local L.P Gas Supplier .
- (e) This specification and the contract drawings.

C L.P.GAS BULK STORAGE TANKS

The L.P Gas bulk storage tank shall be of either vertical or horizontal cylindrical mild steel construction manufactured from rolled carbon steel plate, welded together in compliance with the requirements of KS 200:2002 and BS 5500 or ASME

(American Society of mechanical Engineers) Codes. The tank shall be earthed to protect against accumulation of static electricity.

The storage tank shall have the following minimum pressure requirements:-

Test Pressure: 25 bars

Working pressure: 9 bars at 20° c

A test certificate shall be provided with the tank. It shall contain details such as the Standards to which the tank has been manufactured, tests done, results of such tests, etc.

The tank shall be supplied complete with:

- (a) Filling valve, take off connection with first stage regulator, Pressure relief valve, Pressure gauge and magnetic float gauge, all housed under a lockable-hinged cover, forming integral part of the tank.
- (b) Drain plug.
- (c) Main isolating Valve.
- (d) Lifting lugs welded at both ends of the tank
- (e) Mounting feet welded to the base of tank .These shall be used to bolt the tank to a concrete base to secure it.

The tank shall be pickled and primed on the outside and painted with two coats of weather resistant paint.

It shall also have a stamp showing the supplier, test pressure and the date of testing.

The tanks are manufactured in various sizes but the following are the standard sizes used in commercial kitchen applications.

Tank capacity 0.5 Ton	1000mm diameter	2000mm long
Tank capacity 1.0 Ton	1000mm diameter	3000mm long
Tank capacity 2.0 Ton	1220mm diameter	4100mm long

Apart from the above minimum specification for the bulk L.P Gas storage tank, any additional requirements may be specified by the L.P. Gas supplier.

The vertical cylinder shall be fitted with a discharge isolation valve, pressure relief valve. Where there is a multiple cylinder bank installation, an automatic change-over valve with a regulator to reduce pressure to 37 mbar shall be incorporated.

Tank sizes are determined by the LPG dealers and they are available in various sizes.

Each tank shall be identified with the following minimum information, permanently marked on the tank shell or imprinted on a stainless steel name plate affixed to the tank in a position normally accessible through the inspection chamber:

- « The name of the Vendor
- « The construction standard to which the tank is built
- « A reference number unique to the tank
- « The date of manufacture
- « The tank capacity

D **PIPEWORK**

Pipes and gas manifolds for L.P. Gas installations shall be galvanized mild steel tubing to B.S. 1387: Class **C** with Pipe threads to B.S. 21 or copper pipes to B.S 2871 with compression fittings to B.S 864. Only P.T.F.E tape or jointing compound specifically made for LPG shall be used. Use of hemp shall not be allowed.

The L.P. Gas pipe work installation shall comply with the requirements of B.S.C.P. 331: Part 3.

Pipe fittings shall be either welded or seamless wrought steel pipe fittings to B.S. 1740: Class C. A union shall be provided on all straight runs of pipe work at a maximum interval of six meters.

Pipe work laid under ground shall be wrapped with pipe wrapping material having vapour permeability of less than 0.11g/m²/d at 25⁰C and 75% relative humidity. The pipe wrapping material shall have high resistance to mineral acids, alkalis and salts and shall be on non-cracking and non-hardening characteristics.

Under ground L.P. Gas distribution pipe work shall be laid to a slope of 1 in 200. Gas service pipes, from the gas distribution pipes to the parts of building they service, shall be laid to rise from the distribution pipe at a slope of 1 in 200. All pipes under the ground shall rest throughout their length on a 150mm deep, flue sand topping, followed by an approved backfilling.

Where the pipe passes through the building fabric, it shall be located within a pipe sleeve, one diameter larger than the pipe passing through it. The void between the pipe and the sleeve shall be packed with bitumen or approved equal material.

Horizontal and vertical pipes within the building shall be fixed off the walls with brass built brackets or spacer type steel pipe clips. The pipe supports spacing intervals for both the horizontal and vertical pipe runs shall be as follows:

Pipe nominal diameter:	15mm	Interval:	1.82 metres
	:	20 & 25mm	: 2.44 metres
	:	32 & 40mm	: 2.75 metres
	:	50mm	: 3.00 metres
	:	65mm	: 3.65 metres

The pipe work underneath the tables worktops to which shall be connected the gas outlets shall be made from gas quality copper.

Pipework shall be bonded in accordance with I.E.E regulations.

E **GAS ISOLATION VALVES**

The L.P. Gas isolation valves shall be quarter turn; lever operated ball valve of brass or stainless steel construction.

The valve shall have “open” and “closed” positions clearly marked on the valve body.

F **TANK SITING AND SAFETY**

I) SITING

The position of the tank shall not be less than 7meters away from adjacent buildings. It shall be the responsibility of others to construct a concrete plinth constructed to structural engineer’s specifications to support the tank. The tank should not be sited in a location known to be susceptible to flooding.

II) SAFETY

A 1.8m high fence with lockable gates around the cylinders to protect them shall be provided. The fence shall be at least 1.5 m away from the tank.

A crash barrier shall also be erected at 2 meters from the fence to stop any vehicles from the access road crashing into the facility.

Two approved **NON-SMOKING OR NAKED LIGHTS** notices in red background shall be fixed on the surrounding fence. They shall be of such a size that can be read from a distance of 20 meters.

A portable carbon dioxide fire extinguishers and shall comply with B.S. EN 3/BS 1449 and B.S. 1004. shall be mounted on the fence next to the entrance.

G TESTING AND COMISSIONING

The whole pipe work system shall be pressure tested using compressed air. The test pressure shall be 7.0 bars. When this pressure is achieved, the pipework shall be uniformly coated with a soap solution. Particular attention should be paid to all connection points. Leaks shall be detected by the presence of bubbles.

If bubbles are found around fittings, the fittings should be checked for tightness and repaired as necessary.

The pressure test on pipe work shall be made before any part of the pipe work is concealed in any manner.

The test pressure shall be maintained for a period of six hours. If the pressure drops during this period, leaks in the pipe work shall be made good and the pressure test repeated for a further six hours.

The bulk gas storage tank shall be pressure tested using compressed air and soap solution. Test pressure of 25 bars shall be applied and soap solution applied uniformly on the entire surface of the tank. If leaks are detected in seams or the shell, notify the tank Vendor.

After completion of pressure tests and installation, the L.P. Gas installations shall be balanced to give the required gas flows at each gas user's point.

SECTION H
SCHEDULE OF CONTRACT DRAWINGS

SCHEDULE OF CONTRACT DRAWINGS

DRAWING NO.	DRAWING TITLE
As shall be issued by the Engineer	

NOTE:

Tenderers are advised to inspect the Mechanical drawings at the office of the **Chief Engineer (Mechanical) – State Department for Public Works**, at Chief Engineer’s (Mechanical) Office, 5th Floor Hill Plaza Building, Community area, Nairobi along Ngong road, during normal working hours.

SECTION I
TECHNICAL SCHEDULE
OF
ITEMS TO BE SUPPLIED

TECHNICAL SCHEDULE

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

NB. The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT LEGIBLE** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule and **CLEARLY HIGHLIGHT THE SPECIFIC REQUIRED ITEM ONLY.**

NO.	DESCRIPTION	MAKE	MODEL NO
1	Water closet		
2	Wash Hand Basin		
3	Plumbing Pipes/PPR		
4	Gate Valves		
5	Drainage pipes/PVC		
6	Fire Extinguishers		
7	Air Conditioner		
8	Laboratory Sinks		
9	Emergency Drench shower		
10	Gas Pressure Regulator		
11	Fume Cupboard		

SECTION J
SCHEDULE OF UNIT RATES

SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.

SCHEDULE OF UNIT RATES

NO.	DESCRIPTION	UNIT RATE (KSHs)
1	Back to Wall water Closet suite	
2	Urinal trough 1800mm	
3	Pedestal Wash Handbasin 450mmx 350mm	
4	500kg LPG Tank	

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
<u>PROVISIONAL SUMS</u>					
A	Allow a Provisional Sum of Kenya Shillings Two Hundred Thousand (Kshs.200,000.00) only for Demolitions and Disposal		SUM		200,000.00
B	Allow a Provisional Sum of Kenya Shillings One Million (Kshs.1,000,000.00) only for Making Good Disturbed Surfaces and Restoration of CivilWorks		SUM		1,000,000.00
C	Allow a Provisional Sum of Kenya Shillings Five Million (Kshs.5,000,000.00) only for Contingency		SUM		5,000,000.00
TOTAL FOR PROVISIONAL SUMS					6,200,000.00

ITEM	DESCRIPTION	TENDERER'S AMOUNT	OFFICIAL USE ONLY/OFF
GRAND SUMMARY			
1	Particular Preliminaries from page PP/10		
2	General Preliminaries from page GP/11		
3	Builders Works from page MS/1		
4	Electrical Installation Works from F/26		
5	ICT Installation Works from ICT /15		
6	Mechanical Installation Works from E-40		
7	Provisional Sums from page PS/1		
Sub- Total			
8	Add 0.03% PPRA Levy		
TOTAL CARRIED TO FORM OF TENDER (VAT INCLUSIVE)			

Amount of tender in words: Kenya

Shillings.....
.....

Tenderer's Signature and

Stamp.....

Address.....

Date

Witness: Name and signature.....

Address.....
.....
.....

Date.....