STANDARD TENDER DOCUMENT

FOR

THE PROPOSED CONSTRUCTION OF HIGH ALTITUDE TRAINING CENTRE AT KAMARINY, ITEN

TENDER NO. SK/ 007/2024-2025

SPORTS KENYA
P.O. BOX PRIVATE BAG, KASARANI
TEL: +020 2390500/1

EMAIL:info@sportkenya.org

Tender Notice

1. Sports Kenya invites sealed bids from eligible candidates for the following tenders:

NO.	DESCRIPTION	ELIGIBILITY	CLOSING DATEAND TIME
1.	SK/ 007/2024-2025- **THE PROPOSED CONSTRUCTION OF HIGH ALTITUDE TRAINING CENTRE AT KAMARINY, ITEN**	OPEN	28TH MARCH 2025 11.00 AM

2. Interested eligible candidates may obtain further information and inspect the tender documents with detailed requirements at the office of the:

SPORTS KENYA HEADQUARTERS
MOI INTERNATIONAL SPORTS CENTRE, KASARANI
PRIVATE BAG KASARANI
Tel: 254-2390500/1
Email info@sportskenya.org
www.sportskenya.org
NAIROBI, KENYA

3. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of a non- refundable fees of KES 1,000 (*one thousand*) in cash or Banker's Cheque and payable to the address given below. Tender documents obtained electronically will be free of charge. Tenderers downloading documents from the designated Website shall advice the Procurement Entity that they had downloaded the tender documents, giving full contact addresses of the tenderer info@sportskenya.org, telephone +254 2390500/1 Private Bag KASARANI.

4. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours 8:00am-5:00pm. Completed Bids are to submitted to SK so as to be received on or before **28th March 2025 at 11.00 a.m.**

5. Tender documents may be viewed and downloaded for free from the website www.sportskenya.org or supplier.treasury.go.ke Tenderers who download the tender document must forward their particulars immediately to info@sportskenya.org to facilitate any further clarification or addendum.

6. Tenders shall be quoted in Kenya Shillings and shall include all taxes. Tenders shall remain valid **for 150 days** from the date of opening of tenders.

7. **All tenders must be accompanied by a *tender Security* of Ksh. 5,000,000.00 (Kenya shillings Five million Only)**

8. The tenderer shall chronologically serialize and initial all pages of the tender documents submitted.

9. Completed tenders must be delivered to the address below on or before **28th March, 2025 at 11.00 am.** Electronic Tenders will not be permitted.

SPORTS KENYA HEADQUARTERS
MOI INTERNATIONAL SPORTS CENTRE, KASARANI
PRIVATE BAG KASARANI
Tel: 254-2390500/1
Email info@sportskenya.org
www.sportskenya.org
NAIROBI, KENYA

10. Tenders will be opened immediately after the deadline date and time specified above or any deadline date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.

11. Tenders will be opened immediately after the deadline date and time specified above or any dead line date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address above.

12. Late tenders will be rejected

    Any canvassing or giving of false information will lead to automatic disqualification.

PART1: TENDERING PROCEDURES

SECTION I - INSTRUCTIONS TO TENDERERS

A GENERAL PROVISIONS

1.0 Scope of tender

1.1 Sports Kenya 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 thisTender 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 SK) 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 SK. It excludes official public holidays.

2.0 Fraud and corruption

2.1 Sports Kenya requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 "Declaration not to engage in corruption". The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her sub-contractors are not debarred from participating in public procurement proceedings.

2.2 Sports Kenya requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the "Certificate of Independent Tender Determination" annexed to the Form of Tender.

2.3 Tenderers shall permit and shall cause their agents (whether declared or not), subcontractors, sub-consultants, service providers, suppliers, and their personnel, to permit SK to inspect all accounts, records and other documents relating to any initial selection process, pre-qualification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by SK.

2.4 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, SK shall indicate in the **Data Sheet** and make availableto all the firms together with this tender document all in formation that would in that respect give such firm any unfair competitive advantage over competing firms.

3.0 Eligible tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.8, or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agree mentor 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. The maximum number of JV members shall be specified in the **TDS.**

3.2 Public Officers of Sports Kenya, their Spouses, Child, Parent, Brothers or Sisters. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have asubstantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.

3.3 A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this tendering process, if the tenderer:

a) Directly or indirectly controls, is controlled by or is under common control with an other tenderer;

b) Receives or has received any director indirect subsidy from another tenderer;

c) Has the same legal representative as an other tenderer;

d) Has a relationship with an other tenderer, directly or through common third parties, that puts it in a position to influence the tender of an other tenderer, or influence the decisions of SK regarding this tendering process;

e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods or works that are the subject of the tender;

f) Any of its affiliates has been hired (or is proposed to be hired) by SK as a consultant for Contract implementation;

g) Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the contract specified in this Tender Document;

h) Has a close business or personal relationship with senior management or professional staff of SK who has the ability to influence the bidding process and:

i) 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; or

ii) May be involved in the implementation or supervision of such Contract unless the conflicts temming from such relationship has been resolved in a manner acceptable to SK throughout the tendering process and execution of the Contract.

3.4 A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified

3.5 A Tenderer (either individually or as a JV member) shall not participate in more than one **Tender, except for permitted alternative tenders**. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. Members of a joint venture may not also make an individual tender, be a sub-contractor in a separate tender or be part of another joint venture for the purposes of the same Tender. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT3.9. ATenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-contractors or sub-consultants for any part of the Contract including related Services.

3.7 A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA www.ppra.go.ke.

3.8 A Tenderer that is a state-owned enterprise or a public institution in Kenya may be eligible to tender and be awarded Contract(s) only if it is determined by SK to meet the following conditions, i.e. if it is:

i) A legal public entity of Government and/or public administration,

ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and;

(iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

3.9 Firms and individuals shall be ineligible if their countries of origin are:

(a) As a matter of law or official regulations, Kenya prohibits commercial relations with that country;

(b) By an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

A tenderer shall provide such documentary evidence of eligibility satisfactory to SK, as SK shall reasonably request.

3.10 **Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, local sub-contracts and labor) from citizen suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met**. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable SK determine if this condition is met shall be provided for this purpose in *"SECTIONI II - EVALUATION AND QUALIFICATION CRITERIA, Item 9"*.

3.11 Pursuant to the eligibility requirements of ITT 3.10, a tender is considered a foreign tenderer, ***If it is registered in Kenya and has less than 51 percent ownership by nationals of Kenya and if it does not subcontract to foreign firms or individuals more than 10 percent of the contract price, excluding provisional sums***. JVs are considered as foreign tenderers if the individual member firms registered in Kenya have less 51 percent ownership by nationals of Kenya. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

3.12 The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website www.nca.go.ke.

3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website www.cak.go.ke.

4.14 A kenyan tenderer shall be eligible to tender if it provides evidence of having fulfilled his/her tax obligations by producing valid tax compliance certificate or tax exemption certificate issued by the Kenya Revenue Authority.

4.0 Eligible goods, equipment, and services

4.1 Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not ineligible under ITT 3.9. At SK's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.

4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

5.0 Tenderer's responsibilities

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

5.2 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 beat the tenderer's own expense.

5.3 The Tenderer and any of its personnel or agents will be granted permission by Sports Kenya to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify SK against allliability arising from death or personal injury, loss of or damage to property, and any other losses and expensesincurred as a result of the examination and inspection.

5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

B. CONTENTS OF TENDER DOCUMENTS

6.0 Sections of Tender Document

6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 10.

PART 1: Tendering Procedures
Section I – Instructions to Tenderers
Section II – Tender Data Sheet (TDS)
Section III- Evaluation and Qualification
Criteria Section IV – Tendering Forms

PART 2: Works' Requirements
Section V - Bills of Quantities
Section VI - Specifications
Section VII - Drawings

PART 3: **Conditions of Contract and Contract Forms**
Section VIII - General Conditions (GCC)
Section IX - Special Conditions of Contract
Section X- Contract Forms

6.2 The Invitation to Tender Notice issued by SK is not part of the Contract documents.
Unless obtained directly from SK, SK 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 10. Incase of any contradiction, documents obtained directly from SK shall prevail.

6.3 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.

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

7.1 A Tenderer requiring any clarification of the Tender Document shall contact SK in writing at SK's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting if provided for in accordance with ITT 7.2. SK will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS p**rior to the deadline for submission of tenders. SK shall forward copies of its response to all tenderers who have acquired the Tender documents in accordance with ITT 7.4, including a description of the inquiry but without identifying its source. If so specified in the **TDS**, SK shall also promptly publish its response at the web page identified in the **TDS**. Should the clarification result in changes to the essential elements of the Tender Documents, SK shall amend the Tender Documents following the procedure under ITT 8 and ITT 22.2.

7.2 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit, examine, inspect the site 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. SK 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 invitedto 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.

7.3 The Tenderer is requested to submit any questions in writing, to reach SK not later than the period specifiedin the **TDS** before the meeting.

7.4 Minutes of a pre-arranged site visit and those of the pre-tender meeting, if applicable, including the text of the

questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents. Minutes shall not identify the source of the questions asked.

7.5 SK shall also promptly publish anonymized (*no names*) Minutes of the pre-arranged site visit and thoseof the pre-tender meeting at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-arranged site visit and those of the pre-tender meeting shall be made by SK exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutesof the pre-Tender meeting. Non-attendance at the pre-arranged site visit and the pre-tender meeting will not bea cause for disqualification of a Tenderer.

8.0 Amendment of Tender Documents

8.1 At any time prior to the deadline for submission of Tenders, Sports Kenya may amend the Tender Documents by issuing addenda.

8.2 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 SK. SK shall also promptly publish the addendum on SK's website in accordance with ITT 7.5.

8.3 To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, SK should extend the dead line for the submission of Tenders, pursuant to ITT 22.2.

C. PREPARATION OF TENDERS

9. Cost of Tendering

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

10.0 Language of Tender

The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and SK, 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 translationof the relevant passages into the English Language**,** in which case, for purposes of interpretation of the Tender,such translation shall govern.

11.0 Documents Comprising the Tender

11.1 The Tender shall comprise the following:

a) Form of Tender prepared in accordance with ITT 12;
b) Schedules including priced Bill of Quantities, completed in accordance with ITT 12 and ITT 14;
c) Tender Security or Tender-Securing Declaration, in accordance with ITT 19.1;
d) Alternative Tender, if permissible, in accordance with ITT 13;
e) ***Authorization****:* written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.3;
f) *Qualifications:* documentary evidence in accordance with ITT 17 establishing the Tenderer's qualifications to per form the Contract if its Tender is accepted;
g) *Conformity:* a technical proposal in accordance with ITT 16;
h) Any other document required in the **TDS.**

11.2 In addition to the requirements under ITT 11.1, Tenders 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 Form of Tender and Schedules

12.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested. The Tenderer shall chronologically serialize all pages of the tender documents submitted.

12.2 The Tenderer shall furnish in the Form of Tender information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Tender.

13. Alternative Tenders

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

13.2 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.

13.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price SK's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by SK, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by SK.

13.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

14.0 Tender Prices and Discounts

14.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.

14.2 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 SK. 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 not withstanding 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.

14.3 The price to be quoted in the Form of Tender, in accordance with ITT 12.1, shall be the total price of the Tender, including any discounts offered.

14.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 12.1.

14.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and SK may require the Tenderer to justify its proposed indices and weightings.

14.6 Where tenders are being invited for individual lots (contracts)or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are opened at the sametime.

14.7 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.

15.0 Currencies of Tender and Payment

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

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

a) A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya (referred to as "the foreign currency requirements") shall (if so allowed in the **TDS**) indicate in the Appendix to Tender the percentage(s) of the Tender Price (excluding Provisional Sums), needed by the Tenderer for the payment of such foreign currency requirements, limited to no more than two foreign currencies.

b) The rates of exchange to be used by the Tenderer in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Tenderer in the Appendix to Tender and shall be based on the exchange rate provided by the Central Bank of Kenya on the date 30 days prior to the actual date of tender opening. Such exchange rate shall apply for all foreign payments under the Contract.

15.3 Tenderers may be required by SK to justify, to SK'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 break down of the foreign currency requirements shall be provided by Tenderers.

16.0 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 as stipulated in Section IV, Tender Forms, insufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

17.0 Documents Establishing the Eligibility and Qualifications of the Tenderer

17.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.

17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.

17.3 If a margin of preference applies as specified in accordance with ITT 33.1, nation al tenderers, individually or in joint ventures, applying for eligibility for national preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

17.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by SK, a particular contractor or group of contractors qualifies for a margin of preference. Further the information will enable SK identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

17.5 The purpose of the information described **in ITT 17.4** above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by SK as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

17.6 The Tenderer shall provide further documentary proof, information or authorizations that SK may request in relation to owner ship and control which in formation on any changes to the information which was provided by the tenderer under ITT 6.4. The obligations to require this information shall continue for the duration

Of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

17.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to SK. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to SK.

17.8 If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the SK is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

17.9 If information submitted by a tenderer pursuant to these requirements, or obtained by SK (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:

i) If the procurement process is still ongoing, the tenderer will bed is qualified from the procurement process,
ii) if the contract has been awarded to that tenderer, the contract award will be set as idepending the outcome of (iii),
iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other person shave committed any criminal offence.

17.10 If a tenderer submits information pursuant to these requirements that is in complete, in accurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 17.8 will ensue unless the tenderer can show to the reasonable satisfaction of SK that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tender.

18.0 Period of Validity of Tenders

18.1. Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by SK in accordance with ITT 22). At ender valid for a shorter period shall be rejected by SK as non-responsive.

18.2 In exceptional circumstances, prior to the expiration of the Tender validity period, SK may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 19, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeitingits Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender.

19.0 Tender Security

19.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the **TDS**, in original form and, in the case of a Tender Security, in the amount and currency **specified** in the **TDS**. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.

19.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

I) cash;
ii) a bank guarantee;
iii) a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority;
(iv) a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.

19.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 18.2.

19.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by SK as non-responsive.

19.5 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the TDS. SK shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined non-responsive or a bidder declines to extend tender validity period.

19.6 The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the TDS.

19.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:

a) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension there to provided by the Tenderer; or

b) if the successful Tenderer fails to: -

   i) sign the Contract in accordance with ITT47; or

   ii) Furnish a Performance Security and if required in the TDS, and any other documents required in the TDS.

19.8 Where tender securing declaration is executed, SK shall recommend to the PPRA to debars the Tenderer from participating in public procurement as provided in the law.

19.9 The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.

19.10 A tenderer shall not issue a tender security to guarantee itself.

20.0 Format and Signing of Tender

20.1 The Tenderer shall prepare one original and one copy of the documents comprising the Tender as described in ITT 11 and submit it physically to Sports Kenya.

20.2 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.

20.3 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. This authorization shall consist of a written confirmation asspecified in the **TDS** and shall be attached to the Tender. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.

20.4 Incase 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.

20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

D. SUBMISSION AND OPENING OF TENDERS

21.0 Sealing and Marking of Tenders

The Bidders to note that the COMBINED TECHNICAL AND FINANCIAL proposal shall be submitted to Moi International Sports Centre, Kasarani. Ground floor

22.0 Tenders must be received by SK on or before 3rd August 2023 at 11.00 am as specified in the **TDS.** When so specified in the **TDS**, tenderers shall not have the option of submitting their Tenders electronically.

22.1 SK may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of SK and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

23.0 Late Tenders

SK shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 22. Any Tender received by SK after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

24.0 Withdrawal, Substitution, and Modification of Tenders

The tenderer may modify the tender after submission and resubmit to the respective folders. All prior submissions cannot be deleted or overwritten. Tenderer to note that the latest submission shall be considered as the final version and all prior submissions shall be disregarded Received by SK prior to the deadline prescribed for submission of Tenders, in accordance with ITT 22.

24.1 Tenders requested to be withdrawn in accordance with ITT 24.1 shall be returned unopened to the Tenderers.

24.2 No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

25. Tender Opening

25.1 Except in the cases specified in ITT 23 and ITT 24.2, SK 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. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS.**

25.2 For withdrawal, modification and substitution of tenders, refer to ITT 24.0

25.3 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bill of Quantities (to be decided on by the tender opening committee) are to be initialed by the members of the tender opening committee attending the opening.

25.4 At the Tender Opening, SK shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 23.1).

25.5 SK shall prepare minutes of the Tender Opening that shall include, as a minimum: -

a) the name of the Tenderer and whether there is a withdrawal, substitution, or modification;
b) the Tender Price, per lot (contract) if applicable, including any discounts;
c) any alternative Tenders;
d) the presence or absence of a Tender Security, if new as required;
e) Number of pages of each tender document submitted.

25.6 The Tenderers' representatives who are present shall be requested to sign the tender opening register. A copy of the tender opening register shall be distributed to all Tenderers.

E. EVALUATION AND COMPARISON OF TENDERS

26. Confidentiality

26.1 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 in accordance with ITT 43.

26.2 Any effort by a Tenderer to influence SK in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

26.3 Notwithstanding ITT 26.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact SK on any matter related to the tendering process, it shall do so in writing.

27.0 Clarification of Tenders

27.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, SK may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request bySK shall not be considered. SK's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by SK in the evaluation of the tenders, in accordance with ITT 31.

27.2 If a tenderer does not provide clarifications of its tender by the date and time set in SK's request for clarification, its Tender may be rejected.

28.0 Deviations, Reservations, and Omissions

28.1 During the evaluation of tenders, the following definitions apply: -

a) *"Deviation"* is a departure from the requirements specified in the tender document;
b) *"Reservation"* is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and
c) *"Omission"* is the failure to submit part or all of the information or documentation required in the Tender document.

29.0 Determination of Responsiveness

29.1 SK's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 11.

29.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:

a) Affecting any substantial way the scope, quality, or performance of the Works specified in the Contract;
b) limit in any substantial way, inconsistent with the tender document, SK's rights or the tenderer's obligations under the proposed contract;
c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

29.3 SK shall examine the technical aspects of the tender submitted in accordance with ITT 16, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

29.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by SK and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30.0 Non-material non-conformities

30.1 Provided that a tender is substantially responsive, SK may waive any non-conformities in the tender.

30.2 Provided that a Tender is substantially responsive, SK may request that the tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non- conformities in the tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its tender.

30.3 Provided that a tender is substantially responsive, SK shall rectify quantifiable non-material non-conformities related to the Tender Price. To this effect, the Tender Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified **in the TDS.**

31.0 Arithmetical Errors

31.1 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.

31.2 Provided that the Tender is substantially responsive, SK shall handle errors on the following basis: -

a) 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.
b) 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
c) if there is a discrepancy between words and figures, the amount in words shall prevail

31.3 Tenderers shall be notified of any error detected in their bid during the notification of award.

32.0 Conversion to Single Currency

For evaluation and comparison purposes, the currency(ies) of the Tender shall be converted in to a single currency asspecified in the **TDS**.

33.0 Margin of Preference and Reservations

33.1 A margin of preference may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.

33.2 A margin of preference shall not be allowed unless it is specified so in the **TDS**.

33.3 Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 33.4.

33.4 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by the authority to be specified in the **TDS**, SK shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

34.0 Nominated Subcontractors

34.1 Unless otherwise stated in the **TDS,** SK does not intend to execute any specific elements of the Works by subcontractors selected/nominated by SK. Incase SK nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and SK. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.

34.2 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.

34.3 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 SK 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.

35. Evaluation of Tenders

35.1 SK shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies SK shall determine the Lowest Evaluated Tender in accordance with ITT 40.

35.2 To evaluate a Tender, SK shall consider the following:

a) Price adjustment in accordance with ITT 31.1 (iii); excluding provisional sums and contingencies, if any, but including Daywork items, where priced competitively;

b) price adjustment due to discounts offered in accordance with ITT 14.4;

c) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 32;

d) price adjustment due to quantifiable non material non-conformities in accordance with ITT 30.3; and

e) any additional evaluation factors specified in the **TDS** and Section III, Evaluation and Qualification Criteria.

35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be considered in Tender evaluation.

35.4 Where the tender involves multiple lots or contracts, the tenderer will be allowed to tender for one or more lots (contracts). Each lot or contract will be evaluated in accordance with ITT 35.2. The methodology to determine the lowest evaluated tenderer or tenderers base done lot (contract) or based on a combination of lots (contracts), will be specified in Section III, Evaluation and Qualification Criteria. In the case of multiple lots or contracts, tenderer will be will be required to prepare the Eligibility and Qualification Criteria Form for each Lot.

36.0 Comparison of tenders

SK shall compare the evaluated costs of all substantially responsive Tenders established in accordance withITT 35.2 to determine the Tender that has the lowest evaluated cost.

37.0 Abnormally low tenders and abnormally high tenders

Abnormally LowTenders

37.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

37.2 In the event of identification of a potentially Abnormally Low Tender, SK shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of thecontract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

37.3 After evaluation of the price analyses, in the event that SK determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, SK shall reject the Tender.

Abnormally high tenders

37.4 An abnormally high tender price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that SK is concerned that it (SK) may not be getting value for money or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.

37.5 Incase of a nab normally high price, SK shall make a survey of the market prices, check if the estimated costof the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. SK may also seek written clarification from the tenderer on the reason for the high tender price. SK shall proceed as follows:

i) If the tender price is abnormally high based on wrong estimated cost of the contract, SK may accept ornot a ccept the tender depending on SK's budget considerations.

ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, SK shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.

37.6 If SK determines that the Tender Price is abnormally too high because genuine competition between tenderersis compromised (*often due to collusion, corruption or other manipulations*), SK shall reject all Tenders andshall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.

38.0 Unbalanced and/ or front-loaded tenders

38.1 If in SK's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or frontloaded, SK may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.

38.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, SK may as appropriate:

a) accept theTender;

b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price;

c) agree on a payment mode that eliminates the inherent risk of SK paying too much for undelivered works;

d) reject the Tender,

39.0 Qualifications of the tenderer

39.1 SK shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

39.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 17. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Sub-contractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

39.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in disqualification of the Tender, in which event Sports Kenya shall proceed to the Tenderer who offers a substantially responsive Tender with the next lowest evaluated price to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

40.0 Lowest evaluated tender

Having compared the evaluated prices of Tenders, SK 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.

41.0 SK's right to accept any tender, and to reject any or all tenders.

SK reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders atany time prior to Contract Award, without there by incurring any liability to Tenderers. Incase of annulment, all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. AWARD OF CONTRACT

42.0 Award criteria

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

43.0 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 SK shall issue a Notificationof 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 (c) above already reveals the reason;
d) the expiry date of the Standstill Period; and
e) instructions on how to request a debriefing and/ or submit a complaint during the stand still period;

44.0 Stand still Period

44.1 The Contract shall not be signed earlier than the expiry of a Stand Still 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.

44.2 Where a Standstill Period applies, it shall commence when SK has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

45.0 Debriefing by SK

45.1 On receipt of SK's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a written request to SK for a debriefing on specific issues or concerns regarding their tender. SK shall provide the debriefing within five days of receipt of the request.

45.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

46.0 Letter of Award

Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed with in the Standstill Period, SK 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.

47.0 Signing of Contract

47.1 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, SK shall send the successful Tenderer the Contract Agreement.

47.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to SK.

47.3 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

48.0 Performance Security

48.1 Within twenty-one (21) days of the receipt of the Letter of Award from SK, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 38.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to SK. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless SK has agreed in writing that a correspondent bank is not required.

48.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security and otherdocuments 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 SK may award the Contract to the Tenderer offering the next Best Evaluated Tender.

48.3 Performance security shall not be required for contracts estimated to cost less than the amount specified in the Regulations.

49.0 Publication of Procurement Contract

Within fourteen days after signing the contract, SK shall publish the awarded contract at its notice boards and websites; and on the Website of the Authority. At the minimum, the notice shall contain the following information:

a) name and address of SK;
b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;
c) the name of the successful Tenderer, the final total contract price, the contract duration;
d) dates of signature, commencement and completion of contract;
e) names of all Tenderers that submitted Tenders, and their Tender prices as readout at Tender opening.

50.0 Procurement related Complaint

The procedures for making Procurement-related Complaints are as specified in the **TDS**

Section II - 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.

A.General	
ITT1.1	The name of the contract is **The Proposed Construction of High Altitude Training Centre at Kamariny** The reference numberof the Contract is **SK/ 007/2024-2025**
ITT2.3	The Information made available on competing firms is as follows:
ITT2.4	The firms that provided consulting services for the contract being tendered for are:
ITT3.1	Maximum number of members in the Joint Venture (JV) shall be: ***[insert a number].***

B. Contents of Tender Document	
ITT 7.1	(i) The Tenderer will submit any request for clarifications in writing at the Address **info@sportskenya.org** To reach SK not later 25th March **2025 at 00.00hrs** (ii) SK shall respond to the request for clarification and publish on the website.www.sportskenya.org
ITT 7.2	a)A pre-tender site visit *shall* take place at the following date, time and place: Date: 25th march 2025;Time 10.30am; Place: Kamariny stadium b) Tender Closing/opening date is 28th March 2025 at 11.00am at Moi International Stadium ground floor
ITT 7.3	The Tenderers are required to submit any request for clarifications in writing, to reach SK not later than 25th March **2025 at 00.00hrs**.
ITT 9.1	For **Tender submission purposes** only, the Procuring Entity's address is: **Sports Kenya Headquarters, Moi Internationals Sports Centre, Kasarani Main Office, Private Bag Kasarani** ***clarifications*** Attention: **Director General** Postal Address: **Private Bag Kasarani** Physical Address: **Moi International Sports Centre Kasarani, Thika Road**
C. Preparation of Tenders	
ITT 11.1 (h)	In addition to the original of the Tender, the number of copies is: 1 (one)
ITT 13.1	Alternative Tenders ***shall not be considered.***
ITT 13.2	Alternative times for completion [insert "shall be" or "shall not be"} Permitted. [If alternative times for completion are permitted, the evaluation method will be as specified in Section III Evaluation and QualificationCriteria.}
ITT 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: **N/A** *[If alternative technical solutions are permitted, the evaluation method will be as specified in Section III Evaluation and Qualification Criteria.}*
ITT 14.5	The prices quoted by the Tenderer shall be: fixed.

ITT 15.2 (a)	The currency shall be Kenya Shilling.
ITT 18.1	Tenderers shall not have the option of submitting their Tenders electronically
ITT 18.3	(a) The Number of days beyond the expiry of the initial tender validity period will be **30 days**.
ITT 19.1	Tender shall provide **a Tender Security**. The type of Tender security shall be a guarantee from banks, approved insurance firms or financial institutions approved by CBK, The amount of the guarantee is **Kenya shillings Five million Kshs 5,000,000** and **valid for 180 days from the date of tender opening.** Tender documents shall be deposited at the **Tender box** situated at **Moi International Sports Centre, Ground Floor.**
ITT 20.1	In addition to the original of the Tender, the number of copies is: ***ONE*** (ORIGINAL AND COPY OF THE ORIGINAL)
ITT 20.3	The written confirmation of authorization to sign on behalf of the Tenderer – **Bidder to provide the Power of Attorney**
D. Submission and Opening of Tenders	
ITT 22.1	**For Tender submission purposes only, the Procuring Entity's address is: Sports Kenya Headquarters, Moi Internationals Sports Centre, Kasarani Main Office, Private Bag Kasarani** **clarifications** **Attention: Director General** **Postal Address: Private Bag Kasarani** **Physical Address: Moi International Sports Centre Kasarani, Thika Road**
ITT 25.1	**The Tender opening shall take place at:** **Physical Address: Sports Kenya Main Office Boardroom, First Floor Moi International Sports Centre Kasarani** **Date:28th March 2025, 11.00am**
E. Evaluation, and Comparison of Tenders	
ITT 30.3	The adjustment shall be based on the_____*[insert "average" or "highest"}* 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, SK shall use its best estimate.

ITT 33.2	A margin of preference **SHALL Apply.**
ITT 33.4	The invitation to tender is extended to the following group that qualify for Reservations **N/A**
ITT 34.1	At this time, Sports Kenya intends to execute certain specific parts of theWorks by subcontractors selected in advance.
ITT 34.2	Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: % *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 subcontracted along with complete details of the subcontractors and theirqualification and experience.
ITT 34.3	*[Indicate NIA if not applicable}* The parts of the Works for which SK permits Tenderers to propose Specialized Subcontractors are designated as follows: **N/A** 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.
ITT 35.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and QualificationCriteria.
ITT 48.1	Other documents required in addition to the Performance Security are **N/A**
ITT 49.1	The procedures for making a Procurement-related Complaint are 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 either by hand delivery or email to: For the attention: **Director General** Procuring Entity: **Sports Kenya** Email address*: info@sportskenya.org* In summary, a Procurement-related Complaint may challenge any of the following: (i) the terms of the Tender Documents; and (i) the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1.0 GENERAL PROVISIONS

1.1 This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. SK shall use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.

1.2 Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:

a) For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.

b) Value of single contract - Exchange rate prevailing on the date of the contract signature.

(c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by SK.

1.3 EVALUATION AND CONTRACT AWARD CRITERIA

SK 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.

2.0 PRELIMINARY EXAMINATION FOR DETERMINATION OF

RESPONSIVENESS Preliminary examination for Determination of Responsiveness

SK will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other mandatory requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements provided for in the preliminary evaluation criteria outlined below. The Standard Tender Evaluation Report Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered non-responsive and will not be considered further. The evaluation shall be conducted in five (5) stages:-
Stage 1: Preliminary/Mandatory evaluation
Stage 2: Technical evaluation
Stage 3 - Financial evaluation
Stage 4 - Due diligence
Stage 5: Recommendation for award

STAGE 1: MANDATORY EVALUATION

S/No	MANDATORY REQUIREMENTS(MR)	YES/NO	
MR1	Valid Copy of certificate of incorporation/ Registration. (Certified by an advocate)		
MR2	Valid Current Tax Compliance Certificate		
MR3	Valid copy of NCA 1 registration certificate in General Building Works		
MR4	Dully filled and signed tender questionnaire		
MR5	Dully filled and signed Confidential business questionnaire		
MR6	Anticorruption Pledge duly signed and stamped		
MR7	Submission of original of tender document properly TAPE BOUND and serialized in the correct sequence and all pages must be initialed and stamped. NB: Spiral Binding and use of Spring or Box Files will not be allowed and will result in automatic disqualification.		

S/No	MANDATORY REQUIREMENTS(MR)	YES/NO	
MR8	Certificate of pre-tender site visit attendance.		
MR9	Valid Copy of Current Single Business permit		
MR10	The Tender Security (Bid Bond) of Ksh. 5,000,000.00 in form of Bank Guarantee from a reputable bank or insurance company approved by Public Procurement Regulatory Authority (PPRA).		
MR11	Submission of valid CR12 form showing the list of directors /shareholding (issued within the last 12 months) or National Identity Card(s) for Sole Proprietorship / Partnership		
MR12	Current annual contractors practicing license from NCA		
MR13	Tenderers who have incomplete projects which have exceeded their contract period and have no approved extension of time /have received default notices/warning shall be treated as not responsive		
MR 14	Letter of authority to seek references from the Tenderer's bankers.		
MR 15	Submit certified copies of Audited accounts (Signed by Auditors and directors) for the last three (3) years (2017, 2018 and 2019) (Certified by an advocate)		
MR 16	Non debarment form duly signed and stamped		

STAGE 2: TECHNICAL EVALUATION

Item	Description	max points
2	**Contracts completed in the last five (5) years; a max of 5 No. projects (Attach evidence)** Stadium Project of similar nature, complexity and magnitude---------- 5 marks each Project of similar nature but of lower value than the one in consideration ---------- 2 marks each Construction Project of similar magnitude ---------- 1 mark each No completed project of similar nature ---- 0 marks **(Certified copies of completion certificates must be provided)**	25
3	**On-going projects within construction schedule (A max of 2 No. projects) (Attach evidence)** Stadium Project of similar nature, complexity and magnitude ---------- 5 marks each Construction Project of similar magnitude or of lower value than the one in consideration ---------- 2 mark each No ongoing project of similar nature -----0 marks each ***(Certified copies of award letters must be provided)***	**10**
	Plant &Equipment: - 30 marks as follows 1. Equipment owned by the firm or leased----------10 2. Adequacy of Equipment (No.)----------10 3. Age and condition of Equipment----------10 *(i) Tippers (ii) Concrete Mixers (iii) Concrete poker vibrators* *(iv) Welding equipments (v) Compaction rollers* *(vi) Hoisting Equipments (vii) Earth Moving Equipments* *(viii) Water Pumps (ix) Power Generators (x) Heavy-duty Trucks*	**30**
	Office and service facilities: - 10 marks as follows Premises: owned 5 marks; leased 3 marks----------5 marks Functional workshop 5 marks; no workshop; 0 marks	**10**

Item	Description	max points
5	**Sanctity of the tender document ie** Having the document intact and pages consecutive as issued (not tempered with in any way) ----------10 Having mutilated or modified the tender document (as in retyping of documents or standard forms except bid security etc ----------0	10
6	***Financial report : Average turnover in Audited financial report (last three [3] years)- 2021-2023*** Turn over greater or equal to 3 times the cost of the project ----------15 Turn over greater or equal to 2 times the cost of the project ----------10 Turn over greater or equal to the cost of the project ----------5 Turn over below the cost of the project ------3 *(Copies must be Certified by signed by auditors)*	15
	TOTAL	**100**
	Pass mark 70 out of 100 to proceed to financial evaluation	

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) Correction, revision, adjustment and amendment of tender.

b) Comparison of Rates for the bidder

c) Consistency of the Rates for the bidder

STAGE 4 - DUE DILIGENCE

Particulars of post – qualification if applicable. The Evaluation Committee may 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)

Price evaluation: in addition to the criteria listed in ITT 35.2 (a) – (d) the following criteria shall apply:

(i) Alternative Completion Times, if permitted under ITT13.2, will be evaluated as follows: ……

(ii) Alternative Technical Solutions for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows……

(iii) Other Criteria; if permitted under ITT 35.2(j):

……

4.0 MULTIPLE CONTRACTS

4.1 Multiple contracts will be permitted in accordance with ITT 35.4. Tenderers are evaluated on basis of Lots and a lowest evaluated tenderer identified for each Lot. SK will select one Option of the two Options listed belowfor award of Contracts.

OPTION 1

(i) If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.

(ii) If a tenderer wins more than one Lot, the tender will be awarded a contract for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots. The tenderer will be awarded only the combinations for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

OPTION2

SK will consider all possible combinations of won Lots [contract(s)] and determine the combination with the lowest evaluated price. Tenders will then be awarded to the Tenderer or Tenderers in the combination provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots.

5.0 ALTERNATIVE TENDERS (ITT 13.1)

Alternative Tenders (ITT 13.1)

Analternative if permitted under ITT 3.1, will be evaluated as follows:

SK shall consider Tenders offered for alternatives as specified in Part 2 - Works requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by SK.

60 MARGIN OF PREFERENCE

61 If the TDS so specifies, SK will grant a margin of preference of fifteen percent (15%) to be loaded on evaluated prices of the foreign tenderers, where the percentage of share holding of Kenyan citizens is less thanfifty- one percent (51%).

62 Contractors shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by SK, a particular contractor or group of contractors qualifies for a margin of preference.

63 After Tenders have been received and reviewed by SK, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders shall be classified into the followinggroups:

i) *Group A:* tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).

ii) *Group B:* tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).

64 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award of contract. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 6.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group B and the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected foraward. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

7. Post qualification and Contract ward (ITT 39), more specifically,

a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.

b) Incase the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.

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 of Kenya Shillings_____

ii) Minimum average annual construction turnover of Kenya Shillings_____*[insert amount]*, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last_____*[insert of year]* years.

iii) Atleast_____(*insert number)* of contract(s) of a similar nature executed within Kenya, or the East African Community or a broad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings_____equivalent.

iv) Contractor's Representative and Key Personnel, which are specifiedas_____

v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as *[specify requirements for each lot as applicable]*_____

iv) Other conditions depending on their seriousness.

a) **History of non-performing contracts**:

Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that Non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last_____(*specify years*). The required information shall be furnished in the appropriate form.

b) Pending Litigation

Financial position and prospective long-term profit ability of the Single Tenderer, and in the case theTenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.

c) Litigation History

There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last _____(*specify years*). All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or on going under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

QUALIFICATION FORM*

1	2	3	4	5
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***	***For SK'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 Sports Kenya 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	
5	State- owned Enterprise	Meets conditions of ITT 3.8	Forms ELI - 1.1 and 1.2, with attachments	
6	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	
7	History of Non• Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1st January [...}.	Form CON-2	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by SK	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender	
9	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.	FormCON-2	

1	2	3	*4*	5
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***	***For SK's Use (Qualification met or Not Met)***
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1st January *[insert year J.*	Form CON - 2	
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 Kenya Shillings *[insert amount]* equivalent for the subject contract(s) net of the Tenderer's other commitments. (ii) The Tenderers shall also demonstrate, to the satisfaction of SK, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to SK, for the last three years *but later than 2020* shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.	Form FIN - 3.1, with attachments	
12	Average Annual Construction Turnover	At least an annual turnover of Kenya Shillings *200 Million for each financial year (between 2020,2021,2022) for the last three years.*	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 for at least within the **last ten (10) years.**	**4.** Form EXP - 4.1 **Experience**	

1	2	3	*4*	5
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***	***For SK's Use (Qualification met or Not Met)***
14	Specific Construction & Contract Management Experience	A minimum number of ***[three (3)*** stadium contracts specifiedbelow that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor within the **five** **(5) years** and tender submission deadline i.e. .. .. (Three (3) contracts, each of minimum value Kenya shillings...**300 Million or** above. (**Attach Reference letters and Completion Certificates)** *[In case the Works are to be tender as individual contracts under multiple contract procedure, the minimum number of contracts required for purposes of evaluating qualification shall be selected from the options mentioned in ITT 35.4}* The similarity of the contracts shall be based on the following: *[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}*	Form EXP 4.2(a)	
15.	**Contractor's Representative and Key Personnel Schedule**	Tenderers should provide the names and details of the suitably qualified Contractor's Re presentative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate. (Bidder to provide atleast 3 key staff to be involved in the implementation of the project. The key personnel should have a diploma level (Minimum requirement) and over five (5) years experience in civil & mechanical or construction Management) Key personnel should attach Cv Support with their Academic Certificates)- Relevant- Diploma level of civil, mechanical engineering and construction management or equivalent) 1	1. FORM PER - 2	

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 K. shillings	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.

<table>
<tr><td colspan="3">Item of equipment</td></tr>
<tr><td rowspan="2">Equipment information</td><td>Name of manufacturer</td><td>Model and power rating</td></tr>
<tr><td>Capacity</td><td>Year of manufacture</td></tr>
<tr><td rowspan="2">Current</td><td colspan="2">Current location</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td></td><td colspan="2">Indicate source of the equipment
☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured</td></tr>
<tr><td colspan="3">Omit the following information for equipment owned by the Tenderer.</td></tr>
<tr><td rowspan="4">Owner</td><td colspan="2">Name of owner</td></tr>
<tr><td colspan="2">Address of owner</td></tr>
<tr><td>Telephone</td><td>Contact name and title</td></tr>
<tr><td>Fax</td><td>Telex</td></tr>
<tr><td>Agreements</td><td colspan="2">Details of rental / lease / manufacture agreements specific to the project</td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td></td><td colspan="2"></td></tr>
</table>

3. FORM PER -1

Contractor's Representative and Key Personnel Schedule

Tenderers should provide the names and details of the suitably qualified Contractor's Re presentative 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:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
2.	**Title of position:** *[_____]*	
	Name of candidate :	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
3.	**Title of position:** *[_____]*	
	Name of candidate :	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
4.	**Title of position:** *[_____]*	
	Name of candidate :	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
5.	**Title of position:** *[in sert title]*	
	Name of candidate	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]

4. FORM PER - 2:

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

Name of Tenderer		
Position[#1]:[*title of position from Form PER-1*]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: *[language and levels of speaking, reading and writing skills]*	
Details		
	Address of Procuring Entity:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Jobtitle:	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
[main project details]	*[role and responsibilities on the project]*	*[time in role]*	*[describe the experience relevant to this position]*

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:	*[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*
Time commitment:	*[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*

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): _____

Counter signature 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 Information

Form

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: *[indicate country of Constitution]*
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 ☐ 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 ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 ☐ In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

52 FORM ELI -1.2

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: _____
1. Attached are copies of original documents of ☐ 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. ☐ 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. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

53 FORM CON –2

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)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
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: _____	
		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

☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4.
☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.

Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
[insert year]	*[insert percentage]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Procuring Entity" or "Contractor"]* Reason(s) for Litigation and award decision *[indicate main reason(s)]*	*[insert amount]*

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.

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*, USD equivalent)**				
	Year1	Year2	Year 3	Year4	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 FORM FIN 3.1: 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 Three years (2023, 2022 2021)

pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

a) reflect the financial situation of the Tenderer or incase 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 statements[1] 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.*

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**
[indicate year]	*[insert amount and indicate currency]*		
Average Annual Construction Turnover *			

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

5.6 FORMFIN–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 contractor contracts as specified in Section III, Evaluation and Qualification Criteria.

Financial Resources		
No.	**Source of financing**	**Amount (Kenya Shilling equivalent)**
1		
2		
3		
4		

5.5 FORM FIN – 3.2:

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,**	**Valueof 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					

5.7 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: _____	

58 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 ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
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:				
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				

59 FORM EXP - 4.2 (b)

Construction Experience in Key Activities

Tenderer's Name:_____
Date:_____
Tenderer's JV Member Name:_____
Sub-contractor's Name[2] (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 ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
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)
Year1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:				

[2] *If applicable*

OTHER FORMS

6. FORM OF TENDER

INSTRUCTIONS TO TENDERERS

i) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.

ii) All italicized text is to help Tenderer in preparing this form.

iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.

iv) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.

- *Tenderer's Eligibility- Confidential Business Questionnaire*
- *Certificate of Independent Tender Determination*
- *Self-Declaration of the Tenderer*

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 SK]*

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 there in for the sum[3] of Kenya Shillings [[*Amount in figures*]_____Kenya Shillings *[amount in words*]_____

   The above amount includes foreign currency[4] amount(s) of [*state figure or a percentage and currency*] [figures] _____[words]_____
   The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

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 for **180 days** from the date of tender closure and it shall remain binding upon us and may be accepted at any time before that date

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 SK based on execution of a Tender-Securing or Proposal-Securing Declaration in SK'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

Option2, 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.")

[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.*

xvi) Binding Contract: We understand that this Tender, together with your written acceptance there of 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 here by 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) We, the Tenderer, have completed fully and signed 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 in structed 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 (*postal and physical addresses, email, and telephone number*) 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 (*postal and physical addresses, email, and telephone number*) 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 SK.

i) Are there any person/persons in *SK)* 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			

(ii) **Conflict of interest disclosure**

	Type of Conflict	Disclosure YES ORNO	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 decisions of the SK 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 SK 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 SK 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 SK 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 SK]* for: _____ *[Name and number of tender]* 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 _____ *[NameofTenderer]* 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. Iamthe 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. TheTenderer 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) theTenderer 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. Inparticular, 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 intentiono r 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 pursuan tto 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 toparagraph(5)(b) above;

8. Thetermsofthe 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, whichevercomesfirst, unless otherwise required byl aw 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/Principal Officer/Direct or of ……...…….. *(insert name of the Company)* who is a Bidder in respect of **Tender No. ……..** for ……. *(insert tender title/description)* for .....*(insert name of SK)* 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/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 SK)* 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 SK)* which is SK.

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 SK).*

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.

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

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 as set disposal proceeding;

2) A person referred to under subsection (1) who contravenes the provisions of that sub-section 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 SK under subsection (7) does not limit any legal remedy SK may have;

5) An employee or agent of SK or a member of the Board or committee of SK whohas 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 in to, take part in any decision relating to the procurement or contract; and

   c) shall not be a subcontract 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, SK:

a) Defines broadly, for the purposes of the above provisions, the terms setf orth 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 processorthe exercise of a contract to the detriment of SK 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 SK of the benefits of free and open competition.

c) Rejects a proposal for award[1] 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 inspect[2] 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.

---

[1] *For the avoidance of doubt, a party's in eligibility to be awarded a contract shall includee, 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 SK to address specific matters related to investigations/audits, suc has 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 copyor electronic format) deemed relevant for th einvestigation/audit, and making copies there of as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.*

2. FORM OF TENDER SECURITY-DEMAND BANK GUARANTEE

Beneficiary:_____

Request forTenders No:

_____

Date:_____

TENDER GUARANTEE No.:_____

Guarantor: _____

1. We have been informed that_____(here inafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here inafter 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 onor before that date.

_____

[signature(s)]

4. FORM OF TENDER SECURITY (TENDER BOND)

[TheSuretyshallfillin this Tender Bond Form in accordance with the instructions

indicated.] BOND NO._____

1. BY THIS BOND *[name of tenderer]* as Principal (hereinafter called "the Principal"), and *[name, legal title,and address of surety],***authorized to transact business in** *[name of country of Purchaser],* as Surety (hereinafter called "the Surety"), are held and firmly bound unto *[name of Purchaser]* as Obligee (hereinafter called "the Purchaser") in the sum of *[amount of Bond][amount in words]*,for the payment of which sum,well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and as signs, jointly and severally, firmly by these presents.

2. WHERE AS the Principal has submitted or will submit a written Tender to the Purchaser dated the_____dayof _____, 20, for the supply of *[name of Contract]* (herein after called the "Tender").

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

   a) Has with drawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender ("the Tender Validity Period"), or any extension there to provided by the Principal; or

   b) Having been notified of the acceptance of its Tender by the Purchaser during the Tender Validity Period or any extension there to provided by the Principal;(i) failed to execute the Contract agreement; or (ii) hasfailedtofurnish the Performance Security, in accordance with the Instructions to tenderers ("ITT") of the Purchaser's Tendering document.

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

4. The Surety here by agrees that its obligation will remain in full force and effect upto and including the date 30 days after the date of expiration of the Tender Validity Period set forth in the Principal's Letter of Tender or any extension thereto provided by the Principal.

5. IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this day of_____20.

Principal:_____ Surety:_____
Corporate Seal *(where appropriate)*

_____ _____
(Signature) *(Signature)*
(Printed name and title) *(Printed name and title)*

4. 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 ourobligation(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 Iam /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 orstamp

5. Appendix toTender

Schedule of Currency requirements

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

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

PART II - WORKS REQUIREMENTS

SECTION V - BILLS OF QUANTITIES

This is Mandatory requirement to be filled by all prospective bidders

The Bills of quantities to be used for these works are contained in the Standard Specifications for Building and Civil Works in Kenya published by the Ministry of Roads and Public Works 1976 Edition. The works shall be carried out in accordance with these General Specifications except as supplemented hereinafter or in the Bills of Quantities.

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 (*provide full description where the site is situated, coordinates from the nearest known landmark like a town and its size*)_____It is approximately_____Kilometers from Nairobi. Access to the site shall be through_____,

   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 SKor SK'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. SK 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 allowany costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but SK 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. Noclaimfor extension of time due to the normal in clement 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 there of. 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 progresson 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 are 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 SK. The negatives and four prints from each negative shall be delivered to the Architect within two weeks ofexposure.

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 are aand 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 giveh is whole time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractordirections 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 workyards, 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 contractorshallsourcethenatowncost.

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 existingand 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 SK against any loss or claim that may arise.

24. 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.

25. 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-upo f his rates.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. The Contractor shall take all necessary precautions such as temporaryf encing, hoarding fans, planked footways, guard–rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.

33. Cover up all and protect from damage, including damage from in clement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion ofthe Contract.

34. 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 toleavecleanallfloors and windows and tore move all paint and cement all rubbis hand dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.

35. 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.

36. The Contractors hall 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 proceduref or 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.

37. The Contractors attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractualpayment section 35(7)(i)(ii) which became effective on 1st July 2000. A 3% withholding tax will be applicable to all in terim 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.

38. 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.

39. The National Construction Authority is a state corporation established under the national construction authorityAct No.14 of 2011. The broad Mandate of the Authority is to over see the construction industry and coordinateits development. The National Construction Authority Regulations 2014 with an effective date of 6thJune 2014,regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.

40. 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 forVAT1.19 as instructed else where.

41. 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.



REPUBLIC OF KENYA

PROPOSED CONSTRUCTION 15,000 SEATER CAPACITY STADIUM

FOR

SPORTS KENYA
PRIVATE BAG KASARANI,NAIROBI

BILLS OF QUANTITIES

PREPARED BY:

KENYA SCHOOL OF TVET

P.O Box 44600 – 00100,
Gigiri, Nairobi

SEPTEMBER, 2024

PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	AMOUNT
	BILL NO.1 **PRELIMINARIES**	
	SECTION 1 **PARTICULAR PRELIMINARIES**	
	EMPLOYER	
A	**The Employer is Sports Kenya** **The term "Employer" and "Government" wherever used in the contract document shall be synonymous.**	
	PROJECT MANAGER	
B	**The term "P.M" or "Project Manager" wherever used in these Bills of Quantities shall be deemed to imply the "Engineer" 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.**	
	ARCHITECT	
C	**The term "Architect" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.**	
	QUANTITY SURVEYOR	
D	**The term "Quantity Surveyor" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is the Ministry of Transport, Infrastructure, Housing and Urban Development & Public Works: State Department for Public Works, P.O.Box 30743-00100, NAIROBI**	
	STRUCTURAL ENGINEER	
E	**The term "Structural Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.**	
	CIVIL ENGINEER	
F	**The term "Civil Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	ELECTRICAL ENGINEER	
A	**The term "Electrical Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.**	
	MECHANICAL ENGINEER	
B	**The term "Mechanical Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.**	
	DESCRIPTION OF THE WORKS	
C	**The Works consist of Construction upto completion of 15,OOO Capacity Stadium**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	LOCATION OF SITE	
A	**The site of the proposed works is** **The Contractor shall be deemed to have visited the site and satisfied himself as to:-** **a) The nature, position, topography and access of the site** **b) The amount of the rubbish or debris to be cleared away before commencement** **c) The nature, current usage, proximity and size of adjoining property and buildings** **d) The availability of land for the erection and positioning of all temporary structures, plant and materials necessary for the execution of the works.** **The Contractor shall obtain approval from the relevant Local Authority in adherence to site access and erection of temporary structures and must ensure all matters relating to the requirements of these authorities.** **No claim will be allowed for travelling or other expenses which may be incurred by the Contractor in visiting the site or preparing the tender for the works.** **The Contractor is advised that the site is within a compund in use and all measures should be taken to avoid nuisance to the existing users.** **All occupation health and safety requirements must be met as required by law.** **This includes prevention/ minimizing noise, dust, fumes, providing access to public facilities as required (lifts, washrooms, staircases).** **Notices should be given prior to disruption of services.** **Where necessary the Contractor will provide temporary facilities for use as instructed by the Project Manager.**	
	MEASUREMENTS	
B	**The works are measured in accordance with the Standard Method of Measurement of Building Works 2008 Edition, published by the Architectural Association of Kenya** **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**	
	SIGNING OF THE TENDER DOCUMENTS	
C	**The bidder shall append his / her signature and / or company's rubber stamp on each and every page of tender document.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	DEMOLITIONS AND ALTERATIONS	
A	**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 excecuted to the satisfaction of the Project Manager. 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** **Unless described as set aside for re-use all arising debris and surplus materials shall be carefully removed from building and carterd away from site.** **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.**	
	MATERIALS FROM DEMOLITIONS	
B	**Any materials arising from demolitions and not re-used shall become the property of the Ministry of Public Works. The Contractor shall allow in his rates the cost of transporting the demolished materials to where directed by the Project Manager.,**	
	CLEARING AWAY	
C	**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.** **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.**	
	CLAIMS / COMPENSATION EVENTS	
D	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	URGENCY OF THE WORKS	
A	**The Contractor is notified that these " works are urgent" and should be completed within the period stated in the Conditions of Contract.** **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.**	
	PREVENTION OF ACCIDENT, DAMAGE OR LOSS	
B	**The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other nomal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accident**	
	WORKING CONDITIONS	
C	**The Contractor shall allow in his rates for any interferance 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.**	
	SIGNBOARD	
D	**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.**	
	LABOUR CAMPS	
E	**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.**	
	PRICING RATES	
F	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	SECURITY	
A	**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.**	
	EXISTING SERVICES	
B	**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**	
	BID SECURITY	
C	**The Bidder shall furnish, as part of his bid, a security in accordance with clause 19.1 of Instruction to Tenderers (Section I of the Tender Document)** **Guarantees issued as surety for the bid shall be valid for a period of One Hundred and Fifty Six (156) days from the date of Tender Opening.**	
	PERFORMANCE SECURITY	
D	**A bond of 5% of the contract sum will be required in accordance with clause 48.0 of Instruction to Tenderers (Section I of the Tender Document) and Clause 4.2 of the General Conditions of Contract (Section VIII of the Tender Document).** **Note that no payments on account of works executed will be made to the Contractor until he has submitted the Performance Bond to the Project Manager, duly stamped signed and sealed by an approved bank or insurance company**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	INSURANCE	
A	**The Contractor shall insure as required in Condition 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 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.**	
	TENDER DOCUMENTS	
B	**Tender documents are as listed in Clause 11 of Section I- Instruction to Tenderers of the Tender Document.**	
	VALUE ADDED TAX	
C	**The Contractor's attention is drawn to V.A.T PUBLIC NOTICE NO. 6 of 5th August, 1993 regarding the Finance Bill 1993 which expanded the V.A.T base to cover construction services amongst other items. The Contractor shall familiarise himself with the said notice and allow in all his Bills of Quantities rates for the net tax. (i.e less input tax where applicable) as required by law.** **The tenderer is advised that in accordance with Government Public Notice No.35 &36 dated 11th September 2003, operational from 1st October 2003, V.A.T will be deducted against the contract sum at the prevailing rate by the Employer and remitted directly to the Commissioner of V.A.T through all interim certificates. It should however be noted that this is not additional tax but a new mode of payement for V.A.T, any excess payment will be refundable once the Contractor has submitted monthly returns to the Commissioner of V.A.T who will do the refunds when satisfied that the V.A.T regulations have been complied with.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	PROJECT MANAGEMENT EXPENSES **Disclaimer: The following items are to be expended at the discretion of the Project Manager.**	
A	**Allow a provisional sum of Kenya Shillings Five Million (Kshs 5,000,000.00) for SDPW project management team expenses.**	
B	**Allow for profits,all taxes and adminstrative expenses for the Item above (%)**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	FORM OF CONTRACT	
A	**The Form of Contract shall be as stipulated in the Republic of Kenya's Standard Tender Document for Procurement of Building Works (22nd April 2021 edition and updated in 21st April 2022) included herein under Section VIII of the Tender Documents**	
	CONDITIONS OF CONTRACT	
B	**These are numbered from 1 to 20 as set out under Section VIII of this Tender Document** **If the Contractor considers that compliance with any of the Conditions of Contract involves any expenses, he shall distribute the cost among the rates for the various items in the Bills of Quantities. No claim shall be allowed arising from the Contractor's compliance with any of the Conditions of Contract.**	
	PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT	
C	**The following are the insertions to be made in the appendix to the Contract Agreement: -** **Period of Final Measurement** **3 Months From Practical completion** **Defects Liability Period** **6 Months from Practical completion** **Date for Possession** **To be agreed with the Project Manager** **Date for Completion** **weeks** **Delay Damages** **0.0025% of the contract price per day** **Period of Interim Certificates** **Monthly** **Period of Honouring Certificates** **60 days** **Percentage of Certified Value Retained** **10 %** **Limit of Retention Fund** **5 %**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	COLLECTION **Brought forward from page PP/1** **Brought forward from page PP/2** **Brought forward from page PP/3** **Brought forward from page PP/4** **Brought forward from page PP/5** **Brought forward from page PP/6** **Brought forward from page PP/7** **Brought forward from page PP/8** **Brought forward from page PP/9**	
	TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO PRELIMINARIES MAIN SUMMARY	

GENERAL PRELIMINARIES

ITEM	DESCRIPTION	AMOUNT
	BILL NO.2 **GENERAL PRELIMINARIES**	
	PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES	
A	**Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.** **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.**	
	ABBREVIATIONS	
B	**Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-**	
	C.M. Shall mean cubic metre	
	S.M. Shall mean square metre	
	L.M. Shall mean linear metre	
	MM Shall mean Millimetre	
	Kg. Shall mean Kilogramme	
	No. Shall mean Number	
	Prs. Shall mean Pairs	
	B.S. Shall mean the British Standard Specification **Published by theBritish Standards Institution, 2 Park Street, London W.I., England.**	
	Ditto Shall mean the whole of the preceding description except as qualified in the description in which it occurs.	
	m.s. Shall mean measured separately.	
	a.b.d Shall mean as before described.	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	SUFFICIENCY OF TENDER	
A	**The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the priced Bills of Quantities. Rates and prices quoted shall cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works**	
	RECORDS	
B	**The Contractor shall ensure proper records are kept and maintained for : Daily Reports on Personnel and Machinery; tracked programme; site photographs in digital camera; weather charts/reports; site instruction book and query book. a digital camera shall be provided for taking progress photos**	
	PLANT, TOOLS AND VEHICLES	
C	**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.**	
	TRANSPORT.	
D	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	MATERIALS AND WORKMANSHIP.	
A	**All work is to be carried out in accordance with the Ministry of Works General Specifications for Building Works, 1976 Edition together with any amendments thereto.** **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.**	
	SIGN FOR MATERIALS SUPPLIED.	
B	**The Contractor will be required to sign a receipt for all articles and materials supplied by the CLIENT 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 CLIENT 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**	
	STORAGE OF MATERIALS	
C	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	SAMPLES	
A	**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.**	
	GOVERNMENT ACTS REGARDING WORK PEOPLE ETC.	
B	**Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. 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 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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	PUBLIC AND PRIVATE ROADS.	
A	**The contractor shall 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.**	
	EXISTING PROPERTY.	
B	**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.**	
	OCUPATIONAL HEALTH AND SAFETY MEASURES	
D	**The Project Manager expects the contractor to adhere to strict safety measures. In this regard the contractor should ensure that all his workers, the consultants and his sub-contractors workmen are wearing Personal Protective Equipment (PPE) before commencement of any work where applicable including overalls with the company name clearly printed on the back each with clearly marked Identification Numbers stitched or imprinted on.** **The Contractor shall allow for providing all watching, lighting, barriers,signs, covering open trenches and protection of the works, including Sub-Contract works, as may be necessary for the safety of the works and for the protection of the public and his own and Sub-Contractors' employees.** **He shall also ensure provision of first aid staff, access to ambulance services at all worksites and arrangement to access local hospital/dispensary with qualified medical staff.** **The Project Manager expects full compliance to this regulation and no excuses will be entertained for non-compliance.**	
	OCUPATIONAL HEALTH AND SAFETY PERSONEL	
E	**The contractor shall allow for Occupational Health and Safety personnel as directed and afford every reasonable facility for the performance of their duties.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	ACCESS TO SITE AND TEMPORARY ROADS.	
A	**Means of access to the Site shall be agreed with the CLIENT 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**	
	AREA TO BE OCCUPIED BY THE CONTRACTOR	
B	**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**	
	OFFICE FOR THE PROJECT MANAGER	
C	**The contractor shall , if so instructed, supply, maintain, service, clean and light a fully furnished, suitable office, having an approximate floor area of not less than 100 sqm for exclusive use of the project. The office shall have a sample room, a toilet and bathroom, kitchen of suitable dimensions with clean running water and electricity connected to the approval of the Project Manager.** **The Contractor shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the "PROJECT MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape.** **On completion of the contract, the contents of the office specified above shall revert to the Client. The contractor shall be responsible throughout the contract period for provision of insurance cover, maintenance of the office equipment and furniture, providing all necesary staff and providing security and garbage disposal facilities**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	LIGHTING AND POWER	
A	**The contractor shall provide at his own risk and cost all temporary artificial lighting and power for use on the works including all sub-contractors and specialists requirements and including all temporary connections, wiring, fittings etc and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection therewith.**	
	WATER RESOURCES AND USEAGE	
B	**The Contractor shall provide at his own risk and cost all necessary water 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.** **The contractor is to provide clean drinking water at the construction site for his workers at all times. All water shall be fresh, clean and pure, free from earthly vegetable or organic matter, acid or alkaline substance in solution or suspension.**	
	SANITATION OF THE WORKS	
B	**The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER** **He may however be allowed use of the existing sanitation facilities but shall be responsible for the proper hygienic maintenace and any damage whatsoever. No guarantees are however given regarding the adequacy of the existing services** **The Contractor will be required to pay all conservancy charges and shall ensure clean daily maintenance and disinfecting of the latrines, and not less than once per week, the whole area shall be sprayed with disinfectant and insecticides and any temporary drains shall be removed and all works and surfaces disturbed made good and then the whole area disinfected and left clean and free from pollution to the satisfaction of the Architect and local authorities.**	
	SUPERVISION AND WORKING HOURS	
C	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	PROVISIONAL SUMS.	
A	**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.Such sums are net and no addition shall be made to them for profit.**	
	PRIME COST (OR P.C.) SUMS.	
B	**The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement . Persons or firms nominated by the Project Manager to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors.Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.**	
	PROGRESS CHART.	
C	**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.**	
	ADJUSTMENT OF P.C. SUMS.	
D	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	ADJUSTMENT OF PROVISIONAL SUMS.	
A	**In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued , but should any part of the work be executed by a Nominated Sub-Contractor or the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.**	
	NOMINATED SUB-CONTRACTORS	
B	**When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts 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".**	
	DIRECT CONTRACTS	
C	**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 in the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	ATTENDANCE UPON OTHER TRADESMEN, ETC.	
A	**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.**	
	PROVISIONAL WORK	
B	**All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER. Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall, if the PROJECT MANAGER so directs, uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	ALTERATIONS TO BILLS, PRICING, ETC.	
A	**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.**	
	BLASTING OPERATIONS	
B	**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.**	
	MATERIALS ARISING FROM EXCAVATIONS	
C	**Materials of any kind obtained from the excavations shall be the property of the Client. 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.**	
	TEMPORARY DISPOSAL OF STORM WATER	
D	**The Contractor shall allow for temporary drainage plumbing and piping for keeping the premises and site free from accumulation of water. He shall also allow for construction and maintaining any necessary storm water drainage structures as directed.** **The contractor shall control earthwork through cascading gabions and distribution channels fomr storm water.** **Protect excavated sections of the route of storm water during heavy rains. Provide erosion channels to natural drains and rivers/streams to minimize erosion.** **Design to incoporate existing drainage pattern and avoid disturbing the same**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	PROTECTION OF THE WORKS.	
A	**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 Client.**	
	WORKS TO BE DELIVERED UP CLEAN	
B	**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**	
	GENERAL SPECIFICATION.	
C	**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.**	
	Carried to collection	

ITEM	DESCRIPTION	AMOUNT
	TRAINING LEVY	
A	**The Contractor's attention is drawn to legal notice No. 237 of October, 1971, 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 Kshs. 50,000.00 in value.**	
	MATERIALS ON SITE	
B	**All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.**	
	HOARDING	
C	**The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails for a total length of approximately five hundred meters(1500 m) including all necessary gates. The Contractor is in addition required to take all precautions necessary for the safe custody of the works,materials, plant, public and Employer's property on the site.**	
	CONTRACTOR'S SUPERINTENDENCE/SITE AGENT	
D	**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.**	
	Carried to Collection	

ITEM	DESCRIPTION	AMOUNT
	COLLECTION **Brought Forward From Page GP/1** **Brought Forward From Page GP/2** **Brought Forward From Page GP/3** **Brought Forward From Page GP/4** **Brought Forward From Page GP/5** **Brought Forward From Page GP/6** **Brought Forward From Page GP/7** **Brought Forward From Page GP/8** **Brought Forward From Page GP/9** **Brought Forward From Page GP/10** **Brought Forward From Page GP/11** **Brought Forward From Page GP/12** **Brought Forward From Page GP/13**	
	TOTAL FOR GENERAL PRELIMINARIES CARRIED TO PRELIMINARIES MAIN SUMMARY	

PRELIMINARIES
MAIN SUMMARY

PRELIMINARIES -MAIN SUMMARY

BILL NO	BILL TITLE	PAGE NO.	AMOUNT
1	PARTICULAR PRELIMINARIES	PP /10	
2	GENERAL PRELIMINARIES	GP /14	
	PRELIMINARIES TOTAL CARRIED TO GRAND SUMMARY		

BUILDERS WORKS

15,000 CAPACITY STADIUM

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 1 **BUILDERS WORKS**				
	SECTION 2				
	ELEMENT 1 **SUBSTRUCTURE WORKS** **All Provisional**				
	Terraces				
A	**Clear site of all shrubs, bushes and small trees; grub up roots and cart away to an approved dumping site**	**12415**	**SM**		
	Excavation and earthwork				
	Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material				
B	**Bulk excavate to reduce levels; commencing from ground level, depth not exceeding 1.50m deep**	**7449**	**CM**		
C	**Excavate for foundation trenches in compacted murrum; commencing from stripped level; not exceeding 1.50m deep**	**205**	**CM**		
D	**Excavate for column bases; commencing from stripped level; not exceeding 1.50m deep**	**6253**	**CM**		
E	**Extra over all excavations for excavating in rock, irrespective of class**	**626**	**CM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Disposal				
A	Load, wheel and cart away from site surplus excavated material and deposit in approved dumping area	6879	CM		
B	Return, fill and ram selected excavated material around foundations	4866	CM		
	Disposal of water				
C	Allow for keeping excavations free from all water by pumping or otherwise	1	Item		
	Planking and strutting				
D	Allow for plunking and strutting sides of excavation trenches	1	Item		
	Fillings				
E	Approved hardcore fill; well watered and compacted in 150mm thick layers to approval.	2850	CM		
F	Approved imported fill to make up levels; well watered and compacted to approval. (at the terraces)	6132	CM		
G	50mm Thick quarry dust blinding on surfaces of hardcore	4750	SM		
	Approved chemical anti-termite treatment applied as per the manufacturer's printed instructions to:				
H	Surface of filling	4750	SM		
	50mm plain concrete blinding class 15 to:				
I	Foundation trench	1023	SM		
J	Column bases	3338	SM		
	Vibrated reinforced concrete class 25, allow for admixture to improve strenghth and curing				
K	Strip foundation bases	205	CM		
L	Columns bases	1553	CM		
M	Columns	118	CM		
N	Ground Beams	137	CM		
O	150mm Thick slab	4750	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Deformed high yield steel ribbed bars reinforcement to KS 2712:2017 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
A	**Assorted reinforcement bars**	**161,040**	**KGS**		
	Fabric; reference A142 mesh; 200 x 200 mm; weighing 2.22 kg per square metre; B.S. 4483; including 400 mm laps, bends, tying wire and spacer blocks; to:				
B	**Floor bed**	**4750**	**SM**		
	Marine board formwork and including frames and props (NB. Allow use only)				
C	**Sides of strip foundation bases**	**682**	**SM**		
D	**Sides of column bases**	**60**	**SM**		
E	**Sides of columns**	**72**	**SM**		
F	**Sides of ground beam**	**599**	**SM**		
G	**Edges of slab over 75mm but not exceeding 150mm thick**	**225**	**LM**		
	25mm Thick approved styrofoam filled at expansion joints in:				
H	**Columns**	**200**	**SM**		
I	**Slab**	**600**	**SM**		
J	**25 x 25 mastic sealant or equal and approved**	**35**	**LM**		
	Approved local natural stone walling with a compressive strength of 7.0 N/mm2; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25mm x 20-gauge hoop iron at very alternate course in:				
K	**200 mm Thick walls**	**1364**	**SM**		
	Polythene sheeting ; 1000 gauge; 150 mm laps; laid on:				
L	**Surfaces of hardcore filling**	**4750**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Cement and sand (1:4) render				
A	**15mm thick to plinths**	**947**	**SM**		
B	**Ditto to lift shaft concrete surfaces**	**0**	**SM**		
	Prepare and apply three coats black bituminous paint to:				
C	**Rendered surfaces**	**947**	**SM**		
	Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar				
D	**600 x 600 x 50 mm paving slabs**	**947**	**SM**		
	Carried to collection				
	SUBSTRUCTURE WORKS				
	COLLECTION				
	Carried from page TCS/1				
	Carried from page TCS/2				
	Carried from page TCS/3				
	Carried from above				
	Total Element 1 - Substructures Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 2 **REINFORCED CONCRETE SUPERSTUCTURE** **Vibrated reinforced concrete class 25, allow for admixture to improve strenghth and curing**				
A	**Columns**	**761**	**CM**		
B	**Beams**	**279**	**CM**		
C	**Terraces**	**2077**	**CM**		
D	**Ring beam**	**319.86**	**CM**		
E	**175mm Thick suspended slab**	**3599**	**SM**		
F	**150 mm Thick suspended slab**	**5302**	**SM**		
	Deformed high yield steel ribbed bars reinforcement to KS 573: 2014 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
G	**Assorted reinforcement bars**	**486,199**	**KGS**		
	25mm Thick approved styrofoam filled at expansion joints in:				
H	**Columns**	**288**	**SM**		
J	**Beams**	**1827**	**SM**		
K	**Slab**	**744**	**SM**		
	Marine board formwork and including frames and props (NB. Allow use only)				
L	**Sides of columns**	**6349**	**SM**		
M	**Sides and soffits of beams**	**4967**	**SM**		
N	**Soffit of suspended slabs**	**3599**	**SM**		
P	**Edge of suspended slab 150 - 225mm high**	**1356**	**LM**		
	Total Element 2 - Reinforced concrete superstructure Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.3				
	STAIRCASE				
	The following in 3No. Staircases				
	Insitu reinforced concrete:Class 25 : vibrated in:-				
A	**Steps and stringers.**	**5**	**CM**		
B	**175 mm Thick landing.**	**6**	**SM**		
C	**Stair beam.**	**4**	**CM**		
	Reinforcement to BS 4449:1997 , Grade 460B High strength type 2 Ribbed bars with proof stress of 460 N/mm2; Including all necessary cutting, bending fixing and provision of spacer blocks and stools to S.E's detail				
D	**8 mm bars**	**493**	**KG**		
E	**10 mm ditto**	**282**	**KG**		
F	**12 mm ditto**	**634**	**KG**		
	Fair faced finished formwork as marine board or equal and approved :				
G	**Horizontal concrete soffits of Landings.**	**6**	**SM**		
H	**Sloping soffits of staircases.**	**24**	**SM**		
J	**Edges of risers 150-225 mm High.**	**48**	**LM**		
K	**Edges of landing 225-300 mm High.**	**12**	**LM**		
L	**Sides of stair beam.**	**4**	**SM**		
M	**Sloping open edges of staircase 225-300 mm girth including cutting to profile of steps.**	**12**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Supply and Fix 1050mm High Balustrading comprising 50 mm nominal diameter x 2mm Thick (5.03Kg/m) black pipe handrail, 2/25x 6 mm (1.207Kg/m) flat middle / bottom rail, 4/25 x 25 x 2 mm (1.36Kg/m) x 600 mm long inter-baluster uprights with both ends welded to metal, 50 x 25 x 2 mm Thick (2.15Kg/m) x 900 mm High balusters at 300 mm centres with one end welded to hand rail other built into and including 75 mm deep (avarage) mortice in concrete				
A	**Balustrading to staircases**	**8**	**LM**		
B	**Balconies**	**26**	**LM**		
	Staircase finishes				
	12mm Thick cement/lime/sand (1:1:6) plaster as described in:				
C	**Soffits of landing**	**7**	**SM**		
D	**Ditto sloping exceeding 15˚ from horizontal**	**16**	**SM**		
E	**Sloping open edges of**	**6**	**SM**		
	staircase. Staircase finishes				
	Cement and sand (1:3) paving : with approved hardener : steel trowelled smooth : on concrete : to				
F	**20mm Thick paving finished to receive Polished ceramic floor tiles finish in landings(m.s)**	6	**SM**		
G	**20mm bed to risers finished to receive Polished ceramic floor tiles finish 150mm wide (m.s)**	**32**	**LM**		
H	**20mm bed to tread finished to receive Polished ceramic floor tiles finish 300mm wide (m.s)**	**32**	**LM**		
J	**15mm bed to Skirting finished to receive Polished ceramic floor tiles finish 150mm wide (m.s)**	**12**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	12mm Thick cement/lime/sand (1:1:6) plaster as described in:				
A	**Soffits of landing**	**6**	**SM**		
B	**Ditto sloping exceeding 15˚ from horizontal**	**15**	**SM**		
C	**Sloping open edges of Ramp**	**6**	**SM**		
	Supply and fix only 300x300x10mm Ceramic tiles to floor on prepared screed (m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting: including pvc spacers and expansion joint as necessary: all to Architect's approval.				
D	**300 X 300 X 10 mm Thick Ceramic tiles in patterns as directed by Project Manager.**	6	**SM**		
E	**Skirtings 100mm High, with rounded top edge and coved at junction with pavings.**	**16**	**LM**		
F	**Risers 150mm High.**	**32**	**LM**		
G	**300 mm Wide x 8 mm Thick tread with rounded nosing and 4 No. anti - slip grooves to screed**	**32**	**LM**		
H	**Open edges of staircase, 300 mm wide (extreme) and to profile of treads and risers**	**12**	**LM**		
	Painting and Decoration				
	Touch up primer, prepare and apply one undercoat and two finishing coats first quality gloss oil paint on:				
J	**Surfaces of open grind staircase balustrading (measured on both sides).**	**68**	**SM**		
	Prepare and apply one undercoat and two finishing coats plastic emulsion paint internally on:				
K	**Plastered horizontal soffits : landings**	**7**	**SM**		
L	**Plastered sloping soffits : staircases**	**16**	**SM**		
M	**Plastered sloping soffits : waists to steps**	**6**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION **Brought forward from page TCS/6** **Brought forward from page TCS/7** **Brought forward from above**				
	TOTAL FOR ONE(1) NO. STAIRCASE				
	MULTIPLY BY THREE(3)NO.	**X3**			
	TOTAL CARRIED TO SECTION SUMMARY.				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.4				
	RAMP				
	Vibrated Reinforced Concrete Class 25 in:-				
A	**Beams.**	**12**	**CM**		
B	**175 mm Thick waist.**	**165**	**SM**		
C	**175 mm Thick ramp landing.**	**6**	**SM**		
D	**Thickening 600mm (average) wide x 300mm Thick: form sinking in hardcore bed.**	2	**LM**		
	Reinforcement to BS 4449:1997 , Grade 460B high strength type 2 Ribbed bars with proof stress of 460 N/mm2; Including all necessary cutting, bending fixing and provision of spacer blocks and stools to S.E's detail				
E	**16 mm Diameter bars.**	**4920**	**KG**		
F	**10 mm Diameter bars.**	**1230**	**KG**		
	Fair faced finished formwork as marine board or equal and approved :				
G	**Sloping soffits of ramp**	**165**	**SM**		
H	**Horizontal soffits of landing**	**6**	**SM**		
J	**Vertical sides and soffits of beams**	**34**	**SM**		
K	**Open strings 300mm High (extreme)**	**64**	**SM**		
	Approved Natural local stone of the approved colour; squared ; bush hammered ; in 200mm course heights, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoop iron reinforcement and column wall ties in every alternate course				
L	**200 mm Thick walling.**	**140**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Ramp Finishes				
	20 mm Thick cement sand screed (1:3) including 20 x 4 mm Thick plastic terrazzo strips to approved pattern to receive terrazzo (m/s) ;for				
A	**Backing to ramp to receive Terrazzo (m.s)**	**165**	**SM**		
B	**Ditto; landing.**	**6**	**SM**		
C	**20 x 100 mm Skirting**	**165**	**LM**		
	12mm Thick cement/lime/sand (1:1:6) plaster as described in:				
D	**Soffits of landing**	**6**	**SM**		
E	**Ditto sloping exceeding 15˚ from horizontal**	**165**	**SM**		
F	**Sloping open edges of Ramp**	**60**	**SM**		
	Polished Terrazzo				
	Polished terrazzo consisting of cement and sand (1:3) screed (m.s)or backing finished with a layer of white cement with approved colour additive, sand and approved marble/granite chippings (1:4:2), 20 mm Thick horizontally and minimum 10mm Thick vertically, trowelled to a smooth and even finish and machine polished and waxed to approval				
G	**20 mm Thick paving to Ramp..**	**165**	**SM**		
H	**Ditto;Landings.**	**6**	**SM**		
J	**25 x 100 mm High skirting.**	**165**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Prepare and apply one undercoat and two finishing coats of exterior quality emulsion paint or equal and approved paint as per architect details and approval to;-				
A	**Plastered soffits of ramp.**	**165**	**SM**		
B	**Ditto landing.**	**6**	**SM**		
	Supply and Fix Balustrading comprising 50 mm nominal diameter x 2mm Thick (5.03Kg/m) black pipe handrail, 2/25x 6 mm (1.207Kg/m) flat middle / bottom rail, 4/25 x 25 x 2 mm (1.36Kg/m) x 600 mm long inter-baluster uprights with both ends welded to metal, 50 x 25 x 2 mm Thick (2.15Kg/m) x 900 mm High balusters at 300 mm centres with one end welded to hand rail other built into and including 75 mm deep (avarage) mortice in concrete				
C	**Balustrading to Ramp.**	**60**	**SM**		
	Touch up primer, prepare and apply one undercoat and two finishing coats first quality gloss oil paint on:				
D	**General surfaces of metal measured on both sides.**	**120**	**SM**		
	CARRIED TO COLLECTION				
	COLLECTION **Brought forward from page TCS/10** **Brought forward from page TCS/11** **Brought down from above**				
	SUB TOTAL COST FOR 1 FLOOR				
	MULTIPLY BY TWO (2) NO.	**X2.5**			
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 5				
	ELEMENT 5				
	ROOF CONSTRUCTION				
	(All Provisional)				
	All structural steel framework to BS EN 10025 S275; Tenderer to allow for the following in their rates: all necessary welds, cleats, gusset plates, and sundry fixings such as bolts and nuts, priming with zinc chromate primer & spray painting of exposed steelwork with 2 coats gloss oil paint, delivered to site and fixing in position				
	The following in truss spanning 14700mm hoisted and placed in position at approximately 12250mm above ground level				
A	**100 x 100 x 6mm thick (17.22 Kg/M) external members**	**75,690**	**KG**		
B	**50 x 50 x 3mm thick (4.31 Kg/M) external members**	**23,925**	**KG**		
	Unframed Members				
C	**100 x 100 x 6mm thick (17.22 Kg/M) external members**	**6,264**	**KG**		
D	**150x50x20x2mm ZED Purlins 6.28 kg/M**	**70,448**	**KG**		
E	**32 dia x3 Thick SHS angle bracings**	**6,843**	**KG**		
	Roof covering				
F	**26 Gauge IT5 prepainted roofing sheets laid with 75mm laps, including all hips, valleys, flashing, underlay and all necessary accessories, all in strict accordance with the manufacturer`s fixing instructions**	**9,472**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Fascia				
A	**600 x 3 mm Thick mild steel fascia; powder coated, complete with all support framing; all to the approval of the Project Manager**	**592**	**LM**		
	Galvanised iron gutter system; including all necessary welds, bolts, and sundry fixings; spray painted on exposed metalwork with 2 coats gloss oil paint, delivered to site and fixing in position				
B	**400mm wide x 250mm deep x 3mm Thick Gutters**	**592**	**LM**		
C	**Allow for bolts, nuts,washers, cleats, plates and any other items in connection to the roof construction**		**Item**		
D	**Prepare surface,apply primer,one under coat and two finishing coats quality 'crown' or other equal and approved gloss paint on all steel works after erection**	**176,906**	**KG**		
	Rain Water goods				
	Supply and fix the following Unplasticised PVC rainwater pipes and fittings;solvent welded joits)				
E	**100 mm Diameter downpipe fixed to masonry wall with and including all matching brackets and clips**	**288**	**LM**		
F	**Extra over gutters for 100 mm diameter outlet**	**16**	**NO**		
G	**Extra over down pipe for 100 mm swan- neck bend**	**16**	**NO**		
H	**Ditto for 100 mm shoe**	**16**	**NO**		
J	**Rainwater anti-splash shoe**	**16**	**NO**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION **Brought forward from page TCS/13** **Brought forward from page TCS/14**				
	Total Element 3 - Roof **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 6				
	WALLING				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course to:				
A	**200mm Thick walls externally**	**3223**	**SM**		
B	**200mm Thick walls iinternally**	**4806**	**SM**		
	Damp proof course : bituminous felt : bedded in cement and sand mortar (1:3) : 300 mm laps (measured net-no allowance for laps)				
C	**Horizontal: 200 mm wide**	**2898**	**LM**		
	Total Element 4 - Walling Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO. 7				
	DOORS				
	Fabricate, supply and fix Hybrid Roller shutter door comprising of 75 mm interlocked galvanized cold rolled sections door curtains, bottom rail section galvanized T-section, with 3 mm purpose rolled side sections including roller barrel, Remote controlled motor gearbox with manual chain link compatibility, appropriate finish of one coat of rust inhibiting primer and suitable paint, enclosed in a galvanized steel casing and fascia when open; complete with ground locks as 'Steelways (EA) Limited' or equal and approved.				
A	**Door overall size 3000 x 3000mm High**	**24**	**NO.**		
	Mild Steel Doors/ Gates				
	Supply and fix Purpose made steel door comprising 100 x 50 x 3 mm thick RHS external frame fishtailed grouted into concrete/block/masonry walling; with 100 x 50 x 3mmthick SHS internal surround frames; 50 x 50 x 2mm SHS verticals at 600mm centres and horizontals at 638mm centres; infilled with 18 gauge mild steel diamond shape pressed metal plates; bearing type heavy duty pin type hinges; tower bolts, cleats, cleat boxes, pull handles, 300mm long mild steel slide bolt and 4 mm thick steel hasp and staple; all welding, ground to a smooth finish including for priming door with one coat red oxide primer; all necessary approved ironmongery; top 8No. panels infilled with18 gauge cranked louvres fixed at 45 degrees at 60 mm centres inlcuding two undercoat and one gloss finishing enamel paint to metal work all to architect's details and approved sample to approval.				
B	**Gate overall size 4500 x 2400 mm High**	**1**	**NO**		
C	**Door overall size 2400 x 2400 mm High**	**30**	**NO**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	50mm thick wrot mahogany panelled doors comprising of 200 x 50mm thick stiles and top rail; 150 x 50mm thick middle and bottom rail				
A	**Door overall size 1800 x 3000 mm High. comprising of 2 no 900 x 2100 mm High openable leaf and 900 x 900 mm High fanlight infilled with 6 mm thick clear sheet glass (m/s) : decorative beading all round the panel.**	8	**NO**		
B	**Ditto Door overall size 900 x 2400 mm High**	**35**	**NO**		
	Flush Doors- fire escape door				
C	**One hour (1 Hour) fire resistant door size 1200 x 3000 mm High complete with viewing panel, panic bolt, push bar all other escape hardware; complete with all ironmongery and accessories and 900 x 900 mm High fanlight infilled with 6 mm thick clear sheet glass (m/s)**	4	**NO**		
	Solid core doors; all sides finished with 4mm thick WPC laminate hot pressed in vacuum machine using high quality glue; solid blocking and leaving provision for ironmongery fixing.				
D	**Single door; 50 mm thick; Overall size 900 mm wide x 2700 mm high comprising of 750 x 450mm high fanlight and 750 x 2250mm high openable door**	**132**	**NO**		
	Louvered Duct doors				
E	**Double leaf door 1200x3000mm double leafed door with 4No 290x500mm aluminium louvres including frames, handles, ball catch and locking mechanism complete**	**12**	**NO**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Frames & Finishings				
	Supply and fix Wrot mahogany including polyurethane foam as described in:				
A	**200 x 50mm frame with three labours : moulded screwed and pelleted**	374	LM		
B	**Ditto 150 x 50 mm frame**	650	LM		
C	**200 x 50mm Transome with four labours : moulded**	45	LM		
D	**150 x 50 mm Transome with four labours : moulded**	25	LM		
E	**75 x 25mm moulded architrave.**	1024	LM		
F	**20 x 25 mm quadrant beading**	1024	LM		
G	**20 x 25 mm glazing beading**	1024	LM		
	Ironmongery				
	Supply and fix the following ironmongery from 'ASSA ABLOY' or other equal & approved manufacturer including all necessary matching screws.				
H	**Double action floor springs; hold open:**	8	NO		
J	**Stainless steel pull handle "S" shape - 600 x 32 mm**	2	NO		
K	**Push plate.**	12	NO		
L	**Pull plate.**	12	NO		
M	**Indicator bolt "Vacant/Engaged":**	3	NO		
N	**Ball bearing stainless steel hinges:**	298.5	PRS		
P	**Coat & hat hook - rubber tipped:**	4	NO		
Q	**Stainless steel pull handle, 150 x 19mm:**	2	NO		
R	**Roller catch - 70mm - Satin steel:**	5	NO		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	**Stainless steel disabled signage plate:**	**2**	**NO**		
B	**Stainless steel double washered hinges:**	**6**	**PRS**		
C	**Security bolts, stainless**	**4**	**NO**		
	steel: Signage				
	Supply and fix the following purpose-made signage in printed vinyl panels in approved background and text colours in accordance to the clients corporate colours fixed to finished surfaces in the approved adhesive and matching screws as applicable.				
D	**240 x 50mm door signage in**	**156**	**NO**		
	printed vinyls Door closer				
E	**Heavy duty door closers**	**5**	**NO**		
	Fan light Glazing				
F	**4mm thick first quality clear sheet glass and glazing to timber frames (m.s) with and including 25 x 10mm timber beads and washleather, in panes over 0.1sqm but not exceeding 0.5sqm**	**45**	**SM**		
	Painting and Decoration				
	Prepare and apply one coat of aluminium primer before fixing: to back of wood				
G	**Surfaces over 200 but not exceeding 300mm**	**748**	**LM**		
H	**Surfaces over 100 but not exceeding 200mm**	**1300**	**LM**		
J	**Ditto: not exceeding 100mm**	**2048**	**LM**		
	CARRIED TO COLLECTION BELOW				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Prepare and apply three coats polyurethane clear lacquer polish to woodwork .				
A	**Timber surfaces ; externally**	**368**	**SM**		
B	**Timber surfaces ; internally**	**368**	**SM**		
C	**Surfaces over 200 but not exceeding 300mm**	**748**	**LM**		
D	**Surfaces over 100 but not exceeding 200mm**	**1300**	**LM**		
E	**Ditto: not exceeding 100mm**	**2048**	**LM**		
	Prepare touch up primer and apply two undercoats and one finishing coat gloss oil paint on metal:				
F	**General surfaces :**	**32**	**SM**		
G	**Frames ; 100 - 200 mm girth**	**124**	**LM**		
	CARRIED TO COLLECTION BELOW				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION				
	DOORS				
	Brought forward from page TCS/17				
	Brought forward from page TCS/18				
	Brought forward from page TCS/19				
	Brought forward from page TCS/20				
	Brought forward from page TCS/21				
	TOTAL DOORS CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.8				
	WINDOWS				
	Supply, assemble and fix the following purpose-made welded mild steel casement windows complete with hinges and building lugs to masonry or concrete and incorporating lBurglar proof ,Louvered permanent ventilation panels infilled with approved mosquito gauze wire netting, primed with onecoat or re-oxide primer, comprising standard T-section framing, SHS 50x25X3mm and Intermediate members 25x25x3mm MS T-Section including all necessary couling mulions, transomes, metal gauge permanent vents and afterwards easing and oiling and adjusting opening lights on : -				
	Notes				
	Steel; for glazing with putty, lugs to two jambs, cutting and pinning to concrete or blockwork, fixing to head and sill with screws; plugging				
A	**Window overall size 8000 x 750mm High**	**12**	**NO**		
B	**Ditto; 2000 X1900mm High**	**12**	**NO**		
C	**Ditto; 4500 X1100mm High**	**5**	**NO**		
D	**Ditto; 4000 X2000mm High**	**30**	**NO**		
E	**Ditto; 6000 X2000mm High**	**2**	**NO**		
	Window Cills				
F	**200 x 150 x 30 mm thick concrete window cill with one curved edge including bedding and pointing in cement and sand mortar (1:3) mortar**	**272**	**LM**		
	Window Board				
	Mahogany: selected and kept clean				
G	**200 x 25 mm Window board; plugged**	**272**	**LM**		
H	**35 x 35 mm decorated beading**	**272**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Glass and glazing				
	Supply and fix 4 mm Thick clear sheet glass and glazing with linseed oil based putty to metal as described in:				
A	**Panes not exceeding 0.09 square meters.**	**304.00**	**SM**		
	Supply and fix 6 mm Thick obscure sheet glass and glazing to metal with putty as before described in:				
B	**Panes not exceeding 0.09 square meters.**	**65**	**SM**		
	Prepare, prime with one coat of rust-inhibiting primer and Spray one undercoat and two finishing coats of gloss oil paint as described on:				
C	**General metal surfaces(measured over one side)**	**738**	**SM**		
	CARRIED TO				
	COLLECTION WINDOWS				
	COLLECTION				
	Brought forward from page TCS/23				
	Brought forward from above				
	TOTAL WINDOWS CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 9				
	FINISHES				
	FINISHES				
	Floor Finishes				
	Screed; cement and sand (1:3) 30 mm thick one coat beds; wood floated; to concrete base; generally to				
A	**Floors; horizontal to receive Ceramic tiles (measured seperately)**	**4750**	**SM**		
B	**Ditto; Terraces**	**3888**	**SM**		
C	**Ditto; to 150mm risers**	**1944**	**SM**		
D	**Skirtings; 100mm wide with round with wall finish and coved junction with floor finish.**	**365**	**LM**		
	Ceramic floor tiles				
	Supply and fix Ceramic floor tiles of different sizes with "Tilemaster Tile adhesive 102" as Rhino Special Products Ltd or other equal and approved adhesive : on backing screeds (m.s.): jointed and pointed in approved coloured grout: complete with aluminium edge trims, corner strips and rounded edges to floors				
E	**300 x 600 x 10 mm Thick laid in systematic pattern to Architect's details.**	**4750**	**SM**		
F	**100 x 10mm thick porcelain tiles skirting with rounded top and coved junction with floor finish**	**856**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Wall Finishes				
	12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth to:				
A	**13 mm thick 2No. Coatwork to walls; internal**	**12835**	**SM**		
B	**Ditto to beams**	**4967**	**SM**		
C	**Ditto to columns**	**6349**	**SM**		
D	**Ditto to soffites of ceiling**	**8901**	**SM**		
	Backing; cement and sand 1:3 with approved integral dust proofing additive wood floated				
E	**15 mm thick to receive ceramic tiles**	**1920**	**SM**		
	Supply and fix Ceramic wall tiles on cement and sand backing (m.s) with proprietary dhesive; jointed and pointed in matching coloured proprietary grouting: including pvc spacers, aluminium corner strips and expansion joint as necessary: all to Architect's approval.				
F	**200 x 600 x 6 mm coloured ceramic tiles to wall surfaces**	**1920**	**SM**		
G	**Border tile to Architect's detail**	**42**	**LM**		
	Supply and fix 12mm thick Gypsum Ceiling board fixed to 53 x 32 mm U-section galvanized mild steel framework suspended from concrete above with mild steel angle sections, perimeter channels, primary support channels, strap hangers connecting clips, mahogany timber supports etc; butt jointed with scrim joint filler and taped finish; allowing for stepped ceiling areas where necessary; including skimming with gypsum plaster including forming and curved cuttings; all to Architect's detailed drawings				
H	**Ceiling; horizontal**	**5302**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	**Supply and fix 12mm Thick gypsum bulkhead @ 2400 mm High**	**1591**	**SM**		
B	**Extra over for forming 600 x 600mm access door trap; 25 x 100mm wrot cypress frame and 20 x 50mm wrot cypress stopper: piano hinges, door catch**	**12**	**NO**		
C	**Supply and fix 75 mm Thick wrot cypress cornice with 2 labours**	**355**	**LM**		
	Painting & Decoration				
D	**Carefully prepare the plastered surface by sanding and skimming with gysum powder to achieve the smooth surface.**	**38709**	**SM**		
	Prepare and apply three coats of premium quality silk vinyl paint as "Basco Paints - Duracoat" or "Crown Paints" or equal and approved to:-				
E	**Walls**	**12835**	**SM**		
F	**Beams**	**4967**	**SM**		
G	**Columns**	**6349**	**SM**		
H	**Soffites of ceiling**	**8901**	**SM**		
J	**Gyspum ceiling surfaces**	**5302**	**SM**		
K	**Reveals and jambs 100mm-200mm girth;**	**355**	**LM**		
	EXTERNAL WALL FINISHES				
	Render; 18mm Thick, 1 No. coatwork of cement and sand (1:3); wood floated to concrete or stone work base generally to: -				
L	**Walls**	**3223**	**SM**		
M	**Beams.**	**1920**	**SM**		
N	**Columns.**	**100**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Painting and Decorating				
	Prepare and apply one undercoat; one skimming coat; two finishing coats of first quality external weatherguard paint from an approved supplier (approved by the project Architect) on:				
A	**Walls**	**3223**	**SM**		
B	**Beams.**	**1920**	**SM**		
C	**Columns.**	**100**	**SM**		
	Painting and Decoration				
	Balustrades				
	Balustrading comprising 60mm diameter CHS handrailwith welded onto and including 50x8mm mild steel vertical support:vertical supports at 1040mm c/c welded onto concrete treads (m.s); 4No. 16mm diameter intermediate rails; 60mm diameter CHS footrail; spray painted				
D	**Grille-1750mm High- Front part**	**933**	**SM**		
E	**Grille-1500mm High -Rear part**	**395**	**SM**		
F	**Grille-900mm High- Terraces**	**568**	**SM**		
	Touch up primer, prepare and apply one undercoat and two finishing coats first quality gloss oil paint on:				
G	**Surfaces of open grind staircase balustrading (measured on both sides).**	**1896**	**SM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION				
	Brought forward from page TCS/25				
	Brought forward from page TCS/26				
	Brought forward from page TCS/27				
	Brought forward from page TCS/28				
	Total Element 7 - Finishes Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.10				
	JOINERY,FITTINGS AND FIXTURES				
	Vibrated reinforced concrete				
A	**75mm Thick Suspended slabs.**	**25**	**SM**		
B	**Fabric mesh reinforcement to B.S. 4483 ref: A142 weighing 2.22 kg/sm:**	**25**	**SM**		
	Fair Face formwork: to				
C	**Soffits of slabs**	**25**	**SM**		
D	**Edges of slabs,etc not exceeding 75mm High**	**12**	**LM**		
E	**Boxing to form pocket,size 500 x 400 x 75mm**	**11**	**NO**		
	Solid concrete block walling in cement mortar				
F	**100mm Thick Walling**	**8**	**SM**		
	Cement and sand 1:4 rendering				
G	**18mm Thick Rendering to top of slab finished with a steel trowel.**	**25**	**SM**		
	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); Steel trowelled				
H	**Plaster to soffits**	**25**	**SM**		
	Granite tops				
J	**20mm Thick granite top in approved colour fixed of Concrete to shape and set in one piece to the approval of architects**	**25**	**SM**		
K	**Ditto;but facia 250mm wide**	**12**	**LM**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Wrot cypress or equal and approved as described in:				
A	**50 x 20 mm Bearers**	**233**	**LM**		
B	**100 x 20 mm Ditto**	**264**	**LM**		
	Birch laminate MDF veneered on both sides				
C	**20mm medium density fibre board in birth laminate fitting grooved and chamfered in shelving and divisions**	**45**	**SM**		
D	**450 X 600 mm High doors**	**15**	**NO**		
E	**450 X 450 mm High doors**	**15**	**NO**		
F	**Drawer size 450 x550 x200 mm with 200 x20mm sides and back,220 x 20mm front and 6mm plywood bottom tongued all round**	**10**	**NO**		
G	**19 X19 mm lipping tongued in and glued to edges**	**45**	**LM**		
H	**12 X12 mm drawer runners finished**	**23**	**LM**		
	Supply and fix the following ironmongery				
J	**Marple hinges**	**34**	**NO**		
K	**Brass cupboard door lock**	**15**	**NO**		
L	**Brass D pull handles**	**24**	**NO**		
M	**Brass drawer knobs**	**14**	**NO**		
N	**Brass flush bolts**	**9**	**NO**		
P	**Supply and deliver 100M Bosch Laser Meter -GLM 100 C**	1	**NO**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Cabinets				
	The following built in cabinets				
A	**100mm Thick concrete (1:3:6)**	**4**	**SM**		
	benching Sawn formwork				
B	**Edges of benching 75 - 150mm High**	**6**	**LM**		
	Wrot camphor as described				
C	**50 x 25mm frames with one labour plugged**	**172**	**LM**		
D	**25 x 20mm bearers**	**87**	**LM**		
E	**Ditto but plugged**	**45**	**LM**		
	Wrot camphor as described				
F	**25 x 20mm Lipping**	**45**	**LM**		
	Laminated MDF				
G	**25mm Thick shelving**	**45**	**SM**		
H	**Ditto divisions**	**54**	**SM**		
J	**Ditto doors hardwood lipped all round**	**34**	**SM**		
	Mild steel				
K	**20mm Diameter chrome plated wardrobe rail**	**23**	**LM**		
	Supply and fix the following ironmongery				
L	**Marple hinges**	**28**	**NO**		
M	**Brass cupboard door lock**	**10**	**NO**		
N	**Brass D pull handles**	**14**	**NO**		
P	**Brass drawer knobs**	**6**	**NO**		
Q	**Brass flush bolts**	**7**	**NO**		
	CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Prepare and apply three coats oil paint to woodwork				
A	**To wardrobe shelving**	**45**	**SM**		
B	**Ditto doors**	**54**	**SM**		
C	**Ditto divisions**	**34**	**SM**		
D	**Surfaces of lipping n.e 100mm girth**	**304**	**LM**		
	CARRIED TO				
	COLLECTION				
	COLLECTION FITTINGS				
	Brought forward from page TCS/30				
	Brought forward from page TCS/31				
	Brought forward from page TCS/32				
	Brought forward from above				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.11				
	BUILDER'S WORK IN CONNECTION WITH SPECIALIST SERVICES.				
	Builder's work in connection with electrical installations				
	Cut away for and make good after electrician installing a concealedconduit system to the following points including cutting or leavingholes, mortices, sinking in the structure and finishes and for allmaking good there with:-				
A	**Electrical installations**		**ITEM**		
	Builder's work in connection with mechanical installations				
	Cut away for and make good after plumber installing a concealedpiping system to the following points including cutting or leavingholes, mortices, sinking in the structure and finishes and for allmaking good there with:-				
B	**Mechanical installations**		**ITEM**		
	Total for BWIC with Services Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY OF ELEMENTS	**PAGE**			
1	**SUBSTRUCTURE WORKS**	**TCS/4**			
2	**REINFORCED CONCRETE SUPERSTUCTURE**	**TCS/5**			
3	**STAIRCASE**	**TCS/9**			
4	**RAMP**	**TCS/12**			
5	**ROOF CONSTRUCTION**	**TCS/15**			
6	**WALLING**	**TCS/16**			
7	**DOORS**	**TCS/22**			
8	**WINDOWS**	**TCS/24**			
9	**FINISHES**	**TCS/29**			
10	**JOINERY,FITTINGS AND FIXTURES**	**TCS/33**			
11	**BUILDER'S WORK IN CONNECTION WITH SPECIALIST SERVICES.**	**TCS/34**			
	TOTAL CARRIED TO SUMMARY BUILDERS WORK SUMMARY				

GATE HOUSE

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	BILL NO.2 **BUILDERS WORKS**				
	SECTION 4 **GRAND GATE HOUSE**				
	ELEMENT 1 **SUBSTRUCTURE WORKS** **All Provisional**				
	Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material				
	Excavation and earthwork				
A	**Excavate to remove top vegetable soil, 250mm thick (average); load and wheel and deposit on site as directed**	**147**	**SM**		
B	**Excavate for foundation trenches; commencing from stripped level; not exceeding 1.50m deep**	**63**	**CM**		
C	**Ditto; over 1.50m but not exceeding 3.00m deep**	**29**	**CM**		
D	**Excavate for column bases; commencing from stripped level; not exceeding 1.50m deep**	**43**	**CM**		
F	**Extra over all excavations for excavating in rock, irrespective of class**	**13**	**CM**		
	Disposal				
G	**Load, wheel and cart away from site surplus excavated material and deposit in approved dumping area**	**59**	**CM**		
H	**Return, fill and ram selected excavated material around foundations**	**47**	**CM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Disposal of water				
A	Allow for keeping excavations free from all water by pumping or otherwise	1	Item		
	Planking and strutting				
B	Allow for plunking and strutting sides of excavation trenches	1	Item		
	Fillings				
C	Approved hardcore fill; well watered and compacted in 150mm thick layers to approval.	8	CM		
D	50mm Thick quarry dust blinding on surfaces of hardcore	61	SM		
	Anti-termite treatment				
	Chemical anti-termite treatment applied as per the manufacturer's printed instructions to:				
E	Surface of filling	61	SM		
	Concrete work				
	50mm plain concrete blinding class 10 to:				
F	Foundation trench	42	SM		
G	Column bases	29	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Vibrated reinforced concrete class 25 in:				
A	**Strip foundation bases**	10	CM		
B	**Columns bases**	9	CM		
C	**Columns**	6	CM		
D	**150mm Thick slab**	75	SM		
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 2712:2017 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
E	**8mm Diameter bars**	638	KGS		
F	**10mm Diameter bars**	300	KGS		
G	**12mm Diameter bars**	1,688	KGS		
H	**16mm Diameter bars**	1,125	KGS		
	Fabric; reference A142 mesh; 200 x 200 mm; weighing 2.22 kg per square metre; B.S. 4483; including 400 mm laps, bends, tying wire and spacer blocks; to:				
J	**Floor bed**	75	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Formwork				
	Sawn formwork to:-				
A	**Sides of strip foundation bases**	**35**	**SM**		
B	**Sides of column bases**	**29**	**SM**		
C	**Sides of columns**	**90**	**SM**		
D	**Edges of slab over 75mm but not exceeding 150mm thick**	**65**	**LM**		
	Foundation walling				
	Approved local natural stone walling with a compressive strength of 7.0 N/mm2 (Class A1); bedded and jointed in cement and sand (1:4) mortar, reinforced with 25mm x 20-gauge hoop iron at very alternate course as described in:				
E	**200 mm Thick walls**	**153**	**SM**		
	Damp proof membrane				
	Polythene sheeting ; 1000 gauge; 150 mm laps; laid on:				
F	**Surfaces of hardcore filling**	**75**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Plaster work				
	Cement and sand (1:4) render				
A	**15mm thick to plinths**	**20**	**SM**		
	Painting				
	Prepare and apply three coats black bituminous paint to:				
B	**Rendered surfaces**	**20**	**SM**		
	Splash Apron				
	Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar				
C	**600 x 600 x 50 mm paving slabs**	**78**	**SM**		
	Carried to collection				
	SUBSTRUCTURE WORKS				
	COLLECTION				
	Carried from page GH/1				
	Carried from page GH/2				
	Carried from page GH/3				
	Carried from page GH/4				
	Carried from page GH/5				
	Total Element 1 - Substructures **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 2 **FRAME**				
	Conrete Works				
	Vibrated reinforced concrete class 25 in:				
A	**Columns**	**14**	**CM**		
B	**Ring beams**	**14**	**CM**		
C	**150mm Thick Suspended Roof slab**	**82**	**SM**		
D	**Ditto canopy slab**	**115**	**SM**		
E	**175mm Thick Suspended slab**	**82**	**SM**		
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 573: 2014 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
F	**8mm Diameter bars**	**3,090**	**KGS**		
G	**12mm Diameter bars**	**1,769**	**KGS**		
H	**16mm Diameter bars**	**5,925**	**KGS**		
	Formwork				
	Sawn formwork to:-				
J	**Sides of columns**	**216**	**SM**		
K	**Sides and soffits of beams**	**177**	**SM**		
L	**Edges of suspended slabs; 75-150mm**	**130**	**LM**		
M	**Ditto; 150-225mm**	**64**	**LM**		
	Total Element 2 - Frame **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 3 **ROOF**				
	Light weight roof screed comprising cement, sand and pumice (1:3:7), finished with a 10mm layer of cement and sand (1:4) topping to:				
A	**50mm (Average) screed laid to falls and cross falls**	**82**	**SM**		
B	**50mm Internal angle fillet**	**130**	**NO**		
	APP/EPDM membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process from an approved manufacturer; finish to horizontal roof slab and walls executed by a specialist under 10 years guarantee : provide 10 year guarantee				
C	**To surfaces of roof slab**	**82**	**SM**		
D	**Dressing roofing around 150mm diameter fulbora rain water outlets**	**6**	**NO**		
	250 x 250 x 18mm Thick interlocking concrete quarry tiles : fixed with approved adhesive : on cement and sand (1:4) beds (m/s) : jointed and pointed in coloured grout : incorporating expansion joints at 15m centres fixed to the horizontal surface of roof slab				
E	**To surfaces of roof slab**	**82**	**SM**		
F	**Skirting 150 mm high to roof slab**	**130**	**SM**		
	Supply and fix uPVC rainwater system with screwed and socketed joints; solvent welded joints shall be as per the system manufacturer's written instructions; with and including all the couplings, connectors joints,etc.as required in the running lengths of pipework and also where necessary for pipe fixing clips, holderbats,plugs and screwed				
G	**160mm Diameter downpipe fixed to masonry/concrete surfaces**	**18**	**LM**		
H	**Extra over ditto for swanneck projection with 600mm offset**	**6**	**NO**		
J	**Ditto for bend**	**6**	**NO**		
K	**Fulbora rainwater outlet**	**6**	**NO**		
	Total Element 3 - Roof **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 4 **WALLING**				
	External walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
A	**200mm Thick walls**	**508**	**SM**		
B	**Ditto parapet walls**	**52**	**SM**		
	Precast concrete units: Class 20/20: including hoisting into position and bedding and pointing in cement mortar (1:4)				
C	**350 x 75mm coping twice throated and weathered, bedded, jointed and pointed in gauged mortar.**	**130**	**LM**		
	Internal walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
D	**200mm Thick walls**	**20**	**SM**		
	Three- ply bituminous felt damp proof course bedded in cement ans sand (1:3) mortar (measured net, no allowance for laps):-				
E	**200mm Thick wide damp proof course**	**70**	**LM**		
	Total Element 4 - Walling **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 5 **WINDOWS**				
	Note: All windows as per Architect's window schedule				
	Supply and fix the following approved purpose made power coated heavy duty aluminium casement windows in standard cross sections complete with lugs, hinges, window stays, handles, 90mm wide galvanised vents at top and neoprene and other approved glazing compounds. **Glazing (M/S)**				
A	**Window size 4000 x 1500mm high**	**8**	**NO**		
B	**Window size 900 x 900mm high**	**2**	**NO**		
C	**Window size 650 x 1500mm high**	**1**	**NO**		
	Glazing				
	6mm Thick toughened laminated glass (.38 PVB) fixed to aluminium casements in panes:-				
D	**Not exceeding 0.1 Sm**	**50**	**SM**		
D	**Ditto but to roof skylights**	**20**	**SM**		
	Precast concrete cill				
	Precast concrete: Class 20/20: including hoisting into position and bedding and pointing in cement mortar (1:4)				
E	**200 x 100mm (overall) weathered and throated window cill, fair faced on all exposed surfaces**	**34**	**LM**		
	Total Element 5 - Windows **Carried to Summary of Elements**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 6 **DOORS**				
	Note: All doors as per Architect's door schedule				
	Supply, assemble and fix the following purpose made standard section steel Door obtained from an approved manufacturer, primed with red oxide primer before delivery to site complete with building in lugs with the frames fishtailed and grouted to concrete block wall or concrete head:				
A	**Door size 1000 x 2400mm high**	**2**	**NO**		
	Prepare , Prime and apply one undercoat and two finishing coats of gloss oil paint on :-				
B	**General metal surfaces (both sides measured)**	**10**	**SM**		
	45mm Thick solid core mahogany veneered flush door; with scratch proof laminate finish to both sides; wrot hardwood lipping to all edges				
C	**Door size 1000 x 2100mm high**	**2**	**NO**		
	The following in approved hardwood:				
D	**200 x 50mm door frame**	**2**	**LM**		
E	**Ditto transome**	**2**	**LM**		
F	**150 x 50mm door frame**	**8**	**LM**		
G	**50 x 20mm architrave**	**10**	**LM**		
H	**20mm quadrant beading**	**10**	**LM**		
	Prepare and apply one coat of aluminium wood primer to:-				
J	**Back of wood before fixing; exceeding 100mm but not exceeding 200mm girth**	**10**	**LM**		
K	**Ditto; not exceeding 100mm**	**20**	**LM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	4mm thick clear sheet glass and glazing with putty in timber frames: in panes				
A	Exceeding 0.1 Sm but not exceeding 0.5 Sm to fanlights	1	SM		
	Prepare and apply one coat of NC sanding sealer followed by two coats of 2 pack clear polyurethane varnish to:-				
B	General timber door surfaces	12	SM		
C	Ditto; not exceeding 100mm	20	LM		
D	Ditto; exceeding 100mm but not exceeding 200mm girth	10	LM		
	Ironmongery complete with all matching screws and keys to timber				
E	3-lever mortice lockset	4	NO		
F	100mm brass butt hinges	6	PRS		
G	38mm rubber door stop fixed with rawl bolt	4	NO		
H	Heavy duty door closer	2	NO		
J	3mm Thick x 152mm long x 152mm high door signage in stainless steel engraved with approved pictogram and font lettering	2	NO		
K	2mm Thick x 800mm long x 250mm high Kickplate in stainless steel	2	NO		
L	Stainless steel rubber tipped hat and coat hook	2	NO		
	Carried to collection				
	DOORS				
	COLLECTION				
	Carried from page GH/11				
	Carried from page GH/12				
	Total Element 6 - Doors				
	Carried to Summary of Elements				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 7 **FINISHES**				
	Floor finishes				
	Cement sand (1:3) Thick screed bed to:				
A	**32mm Thick to floors; to receive ceramic tiles (m.s)**	**75**	**SM**		
B	**Ditto to precast concrete tiles (m.s)**	**82**	**SM**		
	8mm Thick ceramic floor tiles: bedded and jointed in cement and sand (1:4) mortar, including pointing with matching coloured grout; aluminium edge trims and silicon joints and all other materials and laying to completion incorporating all spacers and expansion joints to:				
C	**Floors**	**75**	**SM**		
D	**100mm Skirting**	**77**	**LM**		
	250 x 250 x 18mm Thick precast concrete tiles : fixed with approved adhesive : on cement and sand (1:4) beds (m/s) : **jointed and pointed in coloured grout : incorporating expansion joints at 15m centres fixed to the horizontal surface of roof slab**				
E	**To surfaces of roof slab**	**82**	**SM**		
F	**100mm Skirting**	**64**	**LM**		
	External wall finishes				
	12mm Thick cement and sand (1:3) render finished smooth with steel trowel to:				
G	**Masonry and concrete surfaces; Externally**	**612**	**SM**		
	Medium textured wall master byramix coating (approved shade) on rendered surface; applied as per the manufacturer's instructions to:				
H	**Rendered surfaces; Externally**	**442**	**SM**		
	50mm Thick Mazeras cladding, zero jointed horizontally with 20mm grooves vertically, fixed onto cement and sand mortar (m.s) with approved adhesive:				
J	**Rendered surfaces; Externally**	**170**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Internal Wall finishes				
	9mm thick first coat cement and sand (1:4) plaster; 3mm thick second coat of cement and lime putty (1:5); steel trowel finish; to				
A	**Masonry and concrete surfaces**	**504**	**SM**		
	Prepare and apply one universal under coat and two finishing coats of approved 1st quality emulsion paint to				
B	**Plastered surfaces**	**504**	**SM**		
	12mm thick cement sand (1:4) to receive ceramic wall tiles; to:				
C	**Masonry and concrete surfaces**	**96**	**SM**		
	330 x 250 x 8 mm Thick ceramic wall tiles including all necessary corner strips in aluminium; bedded on screeded surface (measured separately) with an approved adhesive jointed and flush pointed with grouting to match tile to:				
D	**Screeded surfaces**	**96**	**SM**		
	9 mm thick Gypsum bulkhead including all the necessary aluminium suspended framing and branderings, panels suspension hangers, flush jointing and trap doors.; butt jointed with scrim joint filler and taped finish; allowing for stepped ceiling areas where necessary; including skimming with gypsum plaster including forming and curved cuttings; all to Architect's detailed drawings; all this:				
E	**Ceiling; not exceeding 3.5m high**	**75**	**SM**		
	Treated wrot cypress (prime grade)				
F	**75 x 25mm moulded cornice, plugged**	**77**	**LM**		
	Prepare and apply one universal under coat and two finishing coats of approved Easy Clean Vinyl Matt Emulsion to:				
G	**Surface of suspended slab**	**82**	**SM**		
H	**Surface of gyspum board**	**75**	**SM**		
J	**Surfaces not exceeding 100mm girth**	**77**	**LM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	FINISHES **COLLECTION** **Carried from page GH/14** **Carried from page GH/15**				
	Total Element 7 - Finishes **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 8 **BUILDERS WORK IN CONNECTION TO SERVICES (All Provisional)**				
	BWIC to mechanical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
A	**Form and leave holes for mupvc pipes**	**50**	**LM**		
B	**Form and leave holes for PPR pipes**	**50**	**LM**		
	BWIC to electrical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
C	**Lighting point with associated switch point**	**20**	**NO**		
D	**External security light fittings with ditto**	**10**	**NO**		
E	**Single socket outlet point**	**10**	**NO**		
F	**Form and leave holes for large conduit pipes**	**600**	**LM**		
	Total Element 10 - BWIC to Services Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	GRAND GATE HOUSE				
	SUMMARY OF ELEMENTS	**PAGE**			
1	**SUBSTRUCTURE WORKS**	**GH/6**			
2	**FRAME**	**GH/7**			
3	**ROOF**	**GH/10**			
4	**WALLING**	**GH/11**			
5	**WINDOWS**	**GH/14**			
6	**DOORS**	**GH/13**			
7	**FINISHES**	**GH/16**			
8	**BWIC TO SERVICES**	**GH/17**			
	TOTAL - GATE HOUSE CARRIED TO BUILDERS WORK SUMMARY				

6 NO. SENTRY BOXES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SECTION 5 **7 NO. SENTRY BOXES** **Note: Quantities captured in this section are for 1 No Sentry Box** **ELEMENT 1** **SUBSTRUCTURE WORKS** **All Provisional** **Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material** **Excavation and earthwork**				
A	**Excavate to remove top vegetable soil, 250mm thick (average); load and wheel and deposit on site as directed**	**29**	**SM**		
B	**Excavate for foundation trenches; commencing from stripped level; not exceeding 1.50m deep**	**24**	**CM**		
C	**Extra over all excavations for excavating in rock, irrespective of class**	**2**	**CM**		
	Disposal				
D	**Load, wheel and cart away from site surplus excavated material and deposit in approved dumping area**	**13**	**CM**		
E	**Return, fill and ram selected excavated material around foundations**	**11**	**CM**		
	Disposal of water				
F	**Allow for keeping excavations free from all water by pumping or otherwise**	**1**	**Item**		
	Planking and strutting				
G	**Allow for planking and strutting sides of excavation trenches**	**1**	**Item**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Fillings				
A	Approved hardcore fill; well watered and compacted in 150mm thick layers to approval.	1	CM		
B	50mm Thick quarry dust blinding on surfaces of hardcore	15	SM		
	Anti-termite treatment				
	Chemical anti-termite treatment applied as per the manufacturer's printed instructions to:				
C	Surface of filling	15	SM		
	Concrete work				
	50mm plain concrete blinding class 10 to:				
D	Foundation trench	16	SM		
	Vibrated reinforced concrete class 20 mm in:				
E	Strip foundation bases	4	CM		
F	150mm Thick slab	20	SM		
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 2712:2017 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
G	8mm Diameter bars	115	KGS		
H	10mm Diameter bars	127	KGS		
J	12mm Diameter bars	238	KGS		
	Fabric; reference A142 mesh; 200 x 200 mm; weighing 2.22 kg per square metre; B.S. 4483; including 400 mm laps, bends, tying wire and spacer blocks; to:				
K	Floor bed	20	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Formwork				
	Sawn formwork to:-				
A	**Sides of strip foundation bases**	**13**	**SM**		
B	**Edges of slab over 75mm but not exceeding 150mm thick**	**27**	**LM**		
	Foundation walling				
	Approved local natural stone walling with a compressive strength of 7.0 N/mm2 (Class A1); bedded and jointed in cement and sand (1:4) mortar, reinforced with 25mm x 20-gauge hoop iron at very alternate course as described in:				
C	**200 mm Thick walls**	**40**	**SM**		
	Damp proof membrane				
	Polythene sheeting ; 1000 gauge; 150 mm laps; laid on:				
D	**Surfaces of hardcore filling**	**20**	**SM**		
	Plaster work				
	Cement and sand (1:4) render				
E	**15mm thick to plinths**	**8**	**SM**		
	Painting				
	Prepare and apply three coats black bituminous paint to:				
F	**Rendered surfaces**	**8**	**SM**		
	Splash Apron				
	Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar				
G	**600 x 600 x 50 mm paving slabs**	**32**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUBSTRUCTURE WORKS				
	COLLECTION				
	Carried from page SB/1				
	Carried from page SB/2				
	Carried from page SB/3				
	Total Element 1 - Substructures Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 2 **FRAME**				
	Conrete Works				
	Vibrated reinforced concrete class 20 in:				
A	**Columns**	2	CM		
B	**Ring beams**	2	CM		
C	**150mm Thick Suspended Roof slab**	29	SM		
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 573: 2014 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
D	**8mm Diameter bars**	337	KGS		
E	**12mm Diameter bars**	193	KGS		
F	**16mm Diameter bars**	646	KGS		
	Formwork				
	Sawn formwork to:-				
G	**Sides of columns**	36	SM		
H	**Sides and soffits of beams**	29	SM		
J	**Edges of suspended slab; 75-150mm**	27	LM		
	Total Element 2 - Frame **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 3 **ROOF**				
	Light weight roof screed comprising cement, sand and pumice (1:3:7), finished with a 10mm layer of cement and sand (1:4) topping to:				
A	50mm (Average) screed laid to falls and cross falls	29	SM		
B	50mm Internal angle fillet	27	NO		
	APP/EPDM membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process from an approved manufacturer; finish to horizontal roof slab and walls executed by a specialist under 10 years guarantee : provide 10 year guarantee				
C	To surfaces of roof slab	29	SM		
D	Dressing roofing around 150mm diameter fulbora rain water outlets	1	NO		
	250 x 250 x 18mm Thick interlocking concrete quarry tiles : fixed with approved adhesive : on cement and sand (1:4) beds (m/s) : jointed and pointed in coloured grout : incorporating expansion joints at 15m centres fixed to the horizontal surface of roof slab				
E	To surfaces of roof slab	29	SM		
F	Skirting 150 mm high to roof slab	27	SM		
	Supply and fix uPVC rainwater system with screwed and socketed joints; solvent welded joints shall be as per the system manufacturer's written instructions; with and including all the couplings, connectors joints,etc.as required in the running lengths of pipework and also where necessary for pipe fixing clips, holderbats,plugs and screwed				
G	160mm Diameter downpipe fixed to masonry/concrete surfaces	3	LM		
H	Extra over ditto for swanneck projection with 600mm offset	1	NO		
J	Ditto for bend	1	NO		
K	Fulbora rainwater outlet	1	NO		
	Total Element 3 - Roof Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 4 **WALLING**				
	External walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
A	**200mm Thick walls**	**66**	**SM**		
B	**Ditto parapet walls**	**11**	**SM**		
	Precast concrete units: Class 20/20: including hoisting into position and bedding and pointing in cement mortar (1:4)				
C	**350 x 75mm coping twice throated and weathered, bedded, jointed and pointed in gauged mortar.**	**27**	**LM**		
	Internal walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
D	**150mm Thick walls**	**14**	**SM**		
	Three- ply bituminous felt damp proof course bedded in cement ans sand (1:3) mortar (measured net, no allowance for laps):-				
E	**200mm Thick wide damp proof course**	**22**	**LM**		
F	**150mm Thick wide damp proof course**	**5**	**LM**		
	Total Element 4 - Walling **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 5 **WINDOWS**				
	Note: All windows as per Architect's window schedule				
	Supply and fix the following approved purpose made power coated aluminium casement windows in standard cross sections complete with lugs, hinges, window stays, handles, 90mm wide galvanised vents at top and neoprene and other approved glazing compounds. Glazing (M/S)				
A	**Window size 2000 x 1500mm high**	2	NO		
B	**Window size 900 x 900mm high**	1	NO		
	Glazing				
	5mm thick obscure glass fixed to aluminium casements in panes:-				
C	**Not exceeding 0.1 Sm**	7	SM		
	Burglar proofing				
D	**Supply and fix decorate mild steel grilles in 50 x 50 x 3mm thick square hollow sections external framework and infilled with 25 x 25 x3mm SHS and 25 x 8mm thick flat bars all cut and welded together in approved decorative patterns including priming with red lead oxide after fabrication**	7	SM		
	Prepare , Prime and apply one undercoat and two finishing coats of gloss oil paint on :-				
E	**General metal surfaces (both sides measured)**	14	SM		
	Precast concrete cill				
	Precast concrete: Class 20/20: including hoisting into position and bedding and pointing in cement mortar (1:4)				
F	**200 x 100mm (overall) weathered and throated window cill, fair faced on all exposed surfaces**	5	LM		
	Total Element 5 - Windows **Carried to Summary of Elements**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 6 **DOORS** **Note: All doors as per Architect's door schedule** **Supply, assemble and fix the following purpose made standard section steel Door obtained from an approved manufacturer, primed with red oxide primer before delivery to site complete with building in lugs with the frames fishtailed and grouted to concrete block wall or concrete head:**				
A	**Door size 1000 x 2100mm high** **45mm Thick solid core mahogany veneered flush door; with scratch proof laminate finish to both sides; wrot hardwood lipping to all edges**	**1**	**NO**		
B	**Door size 800 x 2100mm high** **The following in approved hardwood:**	**1**	**NO**		
C	**200 x 50mm door frame**	**6**	**LM**		
D	**Ditto transome**	**1**	**LM**		
E	**150 x 50mm door frame**	**4**	**LM**		
F	**50 x 20mm architrave**	**10**	**LM**		
G	**20mm quadrant beading**	**10**	**LM**		
	Prepare and apply one coat of aluminium wood primer to:-				
H	**Back of wood before fixing; exceeding 100mm but not exceeding 200mm girth**	**10**	**LM**		
J	**Ditto; not exceeding 100mm**	**20**	**LM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	4mm thick clear sheet glass and glazing with putty in timber frames: in panes				
A	Exceeding 0.1 Sm but not exceeding 0.5 Sm to fanlights	1	SM		
	Prepare and apply one coat of NC sanding sealer followed by two coats of 2 pack clear polyurethane varnish to:-				
B	General timber door surfaces	8	SM		
C	Ditto; not exceeding 100mm	20	LM		
D	Ditto; exceeding 100mm but not exceeding 200mm girth	10	LM		
	Ironmongery complete with all matching screws and keys to timber				
E	3-lever mortice lockset	2	NO		
F	100mm brass butt hinges	3	PRS		
G	38mm rubber door stop fixed with rawl bolt	2	NO		
H	Stainless steel rubber tipped hat and coat hook	1	NO		
	Carried to collection				
	DOORS				
	COLLECTION				
	Carried from page SB/9				
	Carried from page SB/10				
	Total Element 6 - Doors Carried to Summary of Elements				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 7 **FINISHES**				
	Floor finishes				
	Cement sand (1:3) Thick screed bed to:				
A	**32mm Thick to floors; to receive ceramic tiles (m.s)**	**20**	**SM**		
	300 x 600 x 8 mm Thick ceramic floor tiles: bedded and jointed in cement and sand (1:4) mortar, including pointing with matching coloured grout; aluminium edge trims and silicon joints and all other materials and laying to completion incorporating all spacers and expansion joints to:				
B	**Floors**	**20**	**SM**		
C	**100mm Skirting**	**22**	**LM**		
	External wall finishes				
	12mm Thick cement and sand (1:3) render finished smooth with steel trowel to:				
D	**Masonry and concrete surfaces; Externally**	**77**	**SM**		
	Medium textured wall master byramix coating (approved shade) on rendered surface; applied as per the manufacturer's instructions to:				
E	**Rendered surfaces; Externally**	**72**	**SM**		
	50mm Thick Mazeras cladding, zero jointed horizontally with 20mm grooves vertically, fixed onto cement and sand mortar (m.s) with approved adhesive:				
F	**Rendered surfaces; Externally**	**5**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Internal Wall finishes				
	9mm thick first coat cement and sand (1:4) plaster; 3mm thick second coat of cement and lime putty (1:5); steel trowel finish; to				
A	**Masonry and concrete surfaces**	**104**	**SM**		
	Prepare and apply one universal under coat and two finishing coats of approved 1st quality emulsion paint to				
B	**Plastered surfaces**	**104**	**SM**		
	12mm thick cement sand (1:4) to receive ceramic wall tiles; to:				
C	**Masonry and concrete surfaces**	**34**	**SM**		
	300 x 600 x 8 mm Thick ceramic wall tiles including all necessary corner strips in aluminium; bedded on screeded surface (measured separately) with an approved adhesive jointed and flush pointed with grouting to match tile to:				
D	**Screeded surfaces**	**34**	**SM**		
	Ceiling finishes				
	9mm thick first coat cement and sand (1:4) plaster; 3mm thick second coat of cement and lime putty (1:5); steel trowel finish; to				
E	**Ceiling; not exceeding 3.5m high**	**20**	**SM**		
	Prepare and apply one universal under coat and two finishing coats of approved Easy Clean Vinyl Matt Emulsion to:				
F	**Surface of suspended slab**	**20**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	FINISHES				
	COLLECTION				
	Carried from page SB/12				
	Carried from page SB/13				
	Total Element 7 - Finishes Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 8 **BUILDERS WORK IN CONNECTION TO SERVICES** **(All Provisional)**				
	BWIC to mechanical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
A	**Form and leave holes for mupvc pipes**	**5**	**LM**		
B	**Form and leave holes for PPR pipes**	**5**	**LM**		
	BWIC to electrical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
C	**Lighting point with associated switch point**	**5**	**NO**		
D	**External security light fittings with ditto**	**3**	**NO**		
E	**Single socket outlet point**	**3**	**NO**		
F	**Form and leave holes for large conduit pipes**	**5**	**LM**		
	Total Element 8- BWIC to Services **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	7 NO. SENTRY BOXES				
	SUMMARY OF ELEMENTS	**PAGE**			
1	**SUBSTRUCTURE WORKS**	SB/4			
2	**FRAME**	SB/5			
3	**ROOF**	SB/8			
4	**WALLING**	SB/9			
5	**WINDOWS**	SB/10			
6	**DOORS**	SB/13			
7	**FINISHES**	SB/16			
8	**BWIC TO SERVICES**	SB/15			
	TOTAL FOR 1 NO SENTRY BLOCK				
	MULTIPLY BY 5NO				
	TOTAL - 5 NO SENTRY BLOCKS CARRIED TO BUILDERS WORK SUMMARY				

POWER HOUSE

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	BILL NO.2 **POWER HOUSE**				
	ELEMENT 1 **SUBSTRUCTURE WORKS** **All Provisional**				
	Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material				
	Excavation and earthwork				
A	**Excavate to remove top vegetable soil, 250mm thick (average); load and wheel and deposit on site as directed**	**144**	**SM**		
B	**Excavate for foundation trenches; commencing from stripped level; not exceeding 1.50m deep**	**59**	**CM**		
C	**Ditto; 1.50m but not exceeding 3.00m deep**	**59**	**CM**		
D	**Excavate for column bases; commencing from stripped level; not exceeding 1.50m deep**	**13**	**CM**		
E	**Ditto; 1.50m but not exceeding 3.00m deep**	**13**	**CM**		
F	**Extra over all excavations for excavating in rock, irrespective of class**	**14**	**CM**		
	Disposal				
G	**Load, wheel and cart away from site surplus excavated material and deposit in approved dumping area**	**55**	**CM**		
H	**Return, fill and ram selected excavated material around foundations**	**18**	**CM**		
J	**Allow for keeping excavations free from all water by pumping or otherwise**	**1**	**Item**		
K	**Allow for plunking and strutting sides of excavation trenches**	**1**	**Item**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Fillings				
A	Approved hardcore fill; well watered and compacted in 150mm thick layers to approval.	23	CM		
B	50mm thick quarry dust blinding on surfaces of hardcore	106	SM		
	Anti-termite treatment				
	Chemical anti-termite treatment applied as per the manufacturer's printed instructions to:				
C	Surface of filling	4	SM		
	Concrete work				
	50mm plain concrete blinding class 10 to:				
D	Foundation trench	17	SM		
E	Column bases	9	SM		
	Vibrated reinforced concrete (class 25/20 mm) in:				
F	Strip foundation bases	10	CM		
G	Columns bases	3	CM		
H	Columns	1	CM		
J	150mm Thick slab	119	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 2712:2017 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
A	**8mm Diameter bars**	**286**	**KGS**		
B	**10mm Diameter bars**	**134**	**KGS**		
C	**12mm Diameter bars**	**756**	**KGS**		
D	**16mm Diameter bars**	**504**	**KGS**		
	Fabric; reference A142 mesh; 200 x 200 mm; weighing 2.22 kg per square metre; B.S. 4483; including 400 mm laps, bends, tying wire and spacer blocks; to:				
E	**Floor bed**	**119**	**SM**		
	Formwork				
	Sawn formwork to:-				
F	**Sides of strip foundation bases**	**33**	**SM**		
G	**Sides of column bases**	**9**	**SM**		
H	**Sides of columns**	**22**	**SM**		
J	**Edges of slab over 75mm but not exceeding 150mm thick**	**88**	**LM**		
	Polythene sheeting ; 500 gauge; 150 mm laps; laid on:				
K	**Surfaces of hardcore filling**	**119**	**SM**		
	Foundation walling				
	Approved local natural stone walling with a compressive strength of 7.0 N/mm2 (Class A1); bedded and jointed in cement and sand (1:4) mortar, reinforced with 25mm x 20-gauge hoop iron at very alternate course as described in:				
L	**200 mm Thick walls**	**198**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Cable Reticulation Trenches				
A	**500 x 500mm deep (average internally) reinforced concrete class 25 open drain in 200mm bed and 50mm concrete wall, including necessary reinforcements and waterproofing to approval**	**20**	**LM**		
	Mild steel grating				
B	**500mm wide purpose made mild steel grating comprising 50x50x4mm angle framing and 6mm dia. anchor; 4 mm thick chequered plate weld on 50x50x4mm angle painted in three coats gloss oil paint to approval**	**20**	**LM**		
	Service reticulation Manholes				
C	**Manhole internal size 1200 x 1200mm x 1200m deep, comprising of plain concrete (1:3:6) in 150mm thick base slab, 200mm thick solid concrete block walling, 2mm Thick cement sand rendering to sides and bottoms, including all necessary excavations, formwork and reinforcement.**	**2**	**NO**		
D	**Ditto size 800 x 800 x 1000mm deep**	**2**	**NO**		
	Manhole covers				
E	**1200x1200x50mm thick precast concrete manhole cover comprising 50x50x4mm double angle framingpainted in three coats gloss oil paint to approval**	**2**	**NO**		
F	**Ditto size 800 x 800 x 50mm thick**	**2**	**NO**		
	Cement and sand (1:4) render				
G	**20mm thick to plinths**	**26**	**SM**		
	Prepare and apply three coats black bituminous paint to:				
H	**Rendered surfaces**	**26**	**SM**		
	Splash Apron				
	Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar				
J	**600 x 600 x 50 mm paving slabs**	**106**	**SM**		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUBSTRUCTURE WORKS				
	COLLECTION				
	Carried from page PH/1				
	Carried from page PH/2				
	Carried from page PH/3				
	Carried from page PH/4				
	Total Element 1 - Substructures Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 2 **FRAME**				
	Conrete Works				
	Vibrated reinforced concrete (class 25/20 mm) in:				
A	**Columns**	6	CM		
B	**Ring beams**	14	CM		
C	**Raised platform**	2	CM		
D	**150mm Thick Suspended Roof slab**	144	SM		
	Reinforcement				
	Deformed high yield steel ribbed bars reinforcement to KS 573: 2014 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools				
E	**8mm Diameter bars**	1,263	KGS		
F	**12mm Diameter bars**	2,273	KGS		
G	**16mm Diameter bars**	1,515	KGS		
	Formwork				
	Sawn formwork to:-				
H	**Sides of columns**	90	SM		
J	**Sides and soffits of beams**	177	SM		
K	**Sides of raised platform**	4	SM		
L	**Soffit of suspended slab**	144	SM		
M	**Edges of suspended slab**	52	LM		
	Total Element 2 - Frame **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 3 **ROOF**				
	Light weight roof screed comprising cement, sand and pumice (1:3:7), finished with a 10mm layer of cement and sand (1:4) topping to:				
A	50mm (Average) screed laid to falls and cross falls	144	SM		
B	50mm Internal angle fillet	52	NO		
	APP/EPDM membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process from an approved manufacturer; finish to horizontal roof slab and walls executed by a specialist under 10 years guarantee : provide 10 year guarantee				
C	To surfaces of roof slab	144	SM		
D	Dressing roofing around 150mm diameter fulbora rain water outlets	6	NO		
	250 x 250 x 18mm Thick interlocking concrete quarry tiles : fixed with approved adhesive : on cement and sand (1:4) beds (m/s) : jointed and pointed in coloured grout : incorporating expansion joints at 15m centres fixed to the horizontal surface of roof slab				
E	To surfaces of roof slab	144	SM		
F	Skirting 150 mm high to roof slab	52	SM		
	Supply and fix uPVC rainwater system with screwed and socketed joints; solvent welded joints shall be as per the system manufacturer's written instructions; with and including all the couplings, connectors joints,etc.as required in the running lengths of pipework and also where necessary for pipe fixing clips, holderbats,plugs and screwed				
G	160mm Diameter downpipe fixed to masonry/concrete surfaces	18	LM		
H	Extra over ditto for swanneck projection with 600mm offset	6	NO		
J	Ditto for bend	6	NO		
K	Fulbora rainwater outlet	6	NO		
	Total Element 3 - Roof Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 4 **WALLING**				
	External walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
A	**200mm Thick walls**	**150**	**SM**		
B	**200mm Thick parapet walls**	**21**	**SM**		
	Precast concrete louvered blocks jointed and bedded in cement sand (1:4); including copper wire tray fixed on to the wall block; to approved pattern and colour				
C	**200mm Thick walls**	**55**	**SM**		
	Precast concrete units: Class 20/20: including hoisting into position and bedding and pointing in cement mortar (1:4)				
D	**350 x 75mm Precast concrete (class 20) coping twice throated and weathered, bedded, jointed and pointed in gauged mortar.**	**52**	**LM**		
E	**200 x 100mm (overall) weathered and throated cill, fair faced on all exposed surfaces**	**23**	**LM**		
	Internal walling				
	Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar, reinforced with 25 x 20gauge hoop iron at every alternate course as described				
F	**200mm Thick walls**	**48**	**SM**		
	Three- ply bituminous felt damp proof course (DPC) bedded in cement ans sand (1:3) mortar (measured net, no allowance for laps):-				
G	**200mm Thick wide DPC**	**68**	**LM**		
	Total Element 4 - Walling **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 5 **DOORS**				
	Note: All doors as per Architect's door schedule				
	Steel casement doors				
	Supply, assemble and fix the following purpose made standard section steel Door to comply to B.S.990,obtained from an approved manufacturer, primed with red oxide primer before delivery to site complete with, hinges, handles, catches and building in lugs with the frames fishtailed and grouted to concrete block wall or concrete head;Complete:				
A	**Door overall size 5000 x 2700mm high**	**1**	**NO**		
B	**Door overall size 1500 x 2700mm high**	**3**	**NO**		
C	**Door overall size 900 x 2700mm high**	**1**	**NO**		
	Prepare , Prime and apply one undercoat and two finishing coats of gloss oil paint on :-				
D	**General metal door surfaces (both sides measured)**	**94**	**SM**		
	Total Element 5 - Doors **Carried to Summary of Elements**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 6 **FINISHES**				
	Floor finishes				
	Cement sand (1:3) Thick screed bed to:				
A	**32mm Thick to floors; to receive terrazzo (m.s)**	105	SM		
B	**Ditto to sides of raised platform**	4	SM		
	38 mm Thick polished terrazzo laid on concrete with and including 40x3mm plastic dividing strips cut to lengths and set vertically in terrazzo to form panels				
C	**Floors**	105	SM		
D	**Ditto to sides of raised platform**	4	SM		
E	**100mm Skirting**	86	LM		
	External wall finishes				
	15mm Thick cement and sand (1:3) render finished smooth with steel trowel to:				
F	**Masonry and concrete surfaces; Externally**	171	SM		
	Prepare and apply one coat of alkali resistant primer followed by three coats of silicone exterior emulsion with water repellency, breathable and beading to:				
G	**Rendered surfaces; Externally**	171	SM		
	Internal Wall finishes				
	9mm thick first coat cement and sand (1:4) plaster; 3mm thick second coat of cement and lime putty (1:5); steel trowel finish; to				
H	**Masonry and concrete surfaces**	322	SM		
	Prepare and apply one universal under coat and two finishing coats of approved 1st quality emulsion paint to				
J	**Plastered surfaces**	322	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Ceiling finishes				
	9mm thick first coat cement and sand (1:4) plaster; 3mm thick second coat of cement and lime putty (1:5); steel trowel finish; to				
A	**Soffit of suspended slab; not exceeding 3.5m high**	**105**	**SM**		
	Prepare and apply one universal under coat and two finishing coats of approved Easy Clean Vinyl Matt Emulsion to:				
B	**Surface of suspended slab**	**105**	**SM**		
	Carried to collection				
	FINISHES				
	COLLECTION				
	Carried from page PH/10				
	Carried from page PH/11				
	Total Element 6 - Finishes Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT 7 **BUILDERS WORK IN CONNECTION TO SERVICES** **(All Provisional)**				
	BWIC to mechanical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
A	**Form and leave holes for mupvc pipes**	**50**	**LM**		
B	**Form and leave holes for PPR pipes**	**50**	**LM**		
	BWIC to electrical installations				
	Cut away in masonry amd concrete surfaces for the following and make good after installation of a concealed piping system to the following points including cutting or leaving all holes, mortices, sinking in the structure and its finishes and for all making good therewith; to;-				
C	**Lighting point with associated switch point**	**10**	**NO**		
D	**External security light fittings with ditto**	**6**	**NO**		
E	**Single socket outlet point**	**10**	**NO**		
F	**Form and leave holes for large conduit pipes**	**86**	**LM**		
	Total Element 7 - BWIC to Services **Carried to Summary**				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	POWER HOUSE				
	SUMMARY OF ELEMENTS	**PAGE**			
1	**SUBSTRUCTURE WORKS**	**PH/5**			
2	**FRAME**	**PH/6**			
3	**ROOF**	**PH/7**			
4	**WALLING**	**PH/8**			
5	**DOORS**	**PH/9**			
6	**FINISHES**	**PH/12**			
7	**BWIC TO SERVICES**	**PH/13**			
	TOTAL - POWER HOUSE CARRIED TO BUILDERS WORK SUMMARY				

BOUNDARY WALL

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.1 **DEMOLITIONS** **(ALL PROVISIONAL)**				
A	**Carefully remove barbed wire fence nailed on cedar posts at 2 metres c/c approximately 2.5 metres high with a 'kai apple' live fence inter twined to the barbed wire fence; cart away arisings as directed by the Project Manager (Approximately 800 M long)**	**745**	**SM**		
	Less: Credit (See notes below) …..%				
	Selected Materials arising from demolitions as described above are to be used as backfill on site as shall be directed on site by the Architect / Engineer. **Tenderers are therefore advised to give adequate credit commensurate to the materials to be demolished and used as backfill at salvage value expressed as a percentage of total demolitions or as a lumpsum**				
	Total Carried to Collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.2				
	SUBSTRUCTURE				
A	Excavate trenches to receive foundation strip footing and column bases commencing from ground level not exceeding 1.50 metres deep.	671	CM		
B	Excavate pit for column bases not exceeding 1.50 metres deep commencing at reduced level.	376	CM		
C	Extra over all kinds of excavations for excavating in rock irrespective of type and depth.	4	CM		
D	Allow for keeping excavations free from water and mud by pumping, bailing or other approved method.		ITEM		
E	Allow for maintaining and supporting sides of all excavations and keeping same free from fallen material.		ITEM		
F	Return,fill and ram selected excavation materials around foundation excavations.	481	CM		
G	Load and cart away excavated materials from site as directed	190	CM		
	Concrete Work				
	Insitu concrete mix (1:4:8): in				
H	50mm Thick Concrete blinding to strip foundations	447	SM		
J	Ditto; Column bases	251	SM		
	Vibrated reinforced concrete class 25/20mm in:-				
K	Foundation strip footing	90	CM		
L	Column bases	76	CM		
M	Columns	24	CM		
N	Ground Beam	45	CM		
	Total Carried to Collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Reinforcement (all provisional)				
	High yield deformed steel bar reinforcement to BS4461				
A	**8 mm diameter**	**2938**	**KG**		
B	**10 mm diameter**	**4113**	**KG**		
C	**12 mm diameter**	**4700**	**KG**		
	Fair Face formwork as described to:				
D	**Sides of foundations strip**	**64**	**SM**		
E	**Sides of Column bases**	**301**	**SM**		
F	**Sides of columns**	**201**	**SM**		
G	**Sides of Ground beams**	**96**	**SM**		
	Damp Proof Course				
	Damp proof course : bituminous felt : bedded in cement and sand mortar (1:3) : 300 mm laps (measured net-no allowance for laps)				
H	**200 mm wide.**	**745**	**LM**		
	200mm Thick approved natural stone; local; roughly squared to foundation walling; bedding and jointing in cement sand (1:3) mortar and reinforced with 25mm wide x 20 gauge hoop iron in alternate courses as described in:				
J	**200 mm Thick.**	**596**	**SM**		
	Expansion joint filler or other equal and approved as described to:				
K	**12 mm Thick polyethylene form at expansion joint**	**23**	**SM**		
L	**25 mm x 25 mm expandite filler**	**15**	**LM**		
	Total Carried to Collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	WEEP HOLES				
	Allow for and create 2No. 100mm diameter weep				
A	**holes at ground level every 3.0m centers on masonry/concrete wall and prevent ingress using wire mesh grouted in cement sand mortar.**	**250**	**NO**		
	Plinth Treatment				
B	**12mm thick render (400mm girth) of cement to sand 1:4 to receive bituminous paint.**	**48**	**SM**		
C	**Prepare and apply one under coat and two finishing coats of black bituminous paint.**	**48**	**SM**		
	Total Carried to Collection				
	COLLECTION				
	Brought forward from page BW2				
	Brought forward from page BW3				
	Brought forward from above				
	Total Carried to Summary				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.3				
	SUPERSTRUCTURE				
	WALLING				
	Approved natural local stone of the approved colour; squared ; hand dressed one side to architect approval ; bedding, jointing in cement and sand mortar (1:4);including reinforcing with hoop iron in every alternative course				
A	**Walling, thickness 200 mm.**	**1118**	**SM**		
B	**Render; 15mm thick, 1 No. coatwork of cement and sand (1:3); wood floated to concrete or blockwork base generally to interior surface.**	**1118**	**SM**		
C	**Neat recessed Horizontal key and pointing in cement sand mortar 1:3**	**1118**	**SM**		
	Vibrated reinforced concrete: Class 25 in:-				
D	**Columns**	**94**	**CM**		
E	**Beam**	**45**	**CM**		
	Reinforcement (all provisional) High yield deformed steel bar reinforcement to BS4461				
F	**8 mm diameter**	**3008**	**Kg**		
G	**12 mm diameter**	**4512**	**Kg**		
	Fair Face formwork as described to:				
H	**Sides of columns**	**601**	**SM**		
J	**Sides of Ground beams**	**596**	**SM**		
	Expansion joint filler or other equal and approved as described to:				
K	**12 mm Thick polyethylene form at expansion joint**	**69**	**SM**		
L	**25 mm x 25 mm expandite filler**	**23**	**LM**		
	Total Carried to Collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Precast concrete trimming finished fair on all exposed edges.				
A	**300mm wide pre-cast concrete coping twice weathered and twice throated fixed to wall.**	**745**	**LM**		
B	**(800x550)mm square concrete coping weathered and throated on all sides fixed to double columns.**	**250**	**NO**		
	Entrance Gates				
	Mild Steel				
	Comprising 75 x 25 x 3mm thick RHS hollow section top, bottom rails; 50 x 50 x 3mm thick SHS verticle frame and intermediate rails; 25 x 25 x 3mm thick SHS hollow section verticle bars with capped ends welded top, bottom and intermediate rails at 100mm centre; 450 x 3mm thick mild recessed panel; one and a half pairs per leaf of purpose-made hinges welded to gate leaf and gate post (m/s) 2No. purpose-made slide bolts complete with padlock hasp welded to gate; all welding ground to smooth finish.				
C	**Gate overall size 4500mm wide x 3000mm high; all constructed as per architect's details including logo, complete with all locking and hanging accessories**	**16**	**No.**		
D	**50 x 25 x 3mm thick; 2000mm long mild steel RHS; ditto;**	**2No.**			
	Steel Balustrades				
	Mild steel balustrade; comprising 50 x 50 x 4mm RHS balusters at 600mm centres; set into concrete kerb, 4 No 38 x 38 x 3mm vertical bars; 50 x 3mm CHS handrail part welded onto 50 x 4mm balusters; 38 x38 x 3mm diagonal and horinzontal bar, 12mm solid bars interwoven to a space of 1100x100mm wide; smooth welded joints all mild steel sections; one primer coat, undercoat and spray paint with automotive metalic and gloss paint as directed; all to Architect's detail				
E	**Balustrading to staircases**	**70**	**SM**		

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Total Carried to Collection				
	Prepare, prime with one coat of rust-inhibiting primer and apply one undercoat and two finishing coats of super gloss oil paint as described on:				
A	**General metal surfaces (measured over one side)**	**745**	**SM**		
	Provide and fix 1800mm high galvanized mild steel grill framed with 40 x24 x 3mm thick RHS sections including assembly and mortice in concrete. Horizontal members to consist of top middle and bottom rails whereas vertical members to be spaced at 200mm centres. All works to be done to the approval of the Engineer.				
B	**Supply and fix to position 230 gsm ultraviolet protected 1800mm high knitted HDPE fabric net on the mild steel grill (m/s) as Shadepro or equal and approved. The installation is to include brass grommets finished with reinforced black bindings.**	**745**	**SM**		
	Total Carried to Collection				
	COLLECTION				
	Brought forward from page BW/4				
	Brought forward from page BW/5				
	Brought forward from Above				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
1	**DEMOLITIONS**	**BW/1**			
2	**SUBSTRUCTURE (ALL PROVISIONAL)**	**BW/4**			
3	**SUPERSTRUCTURE**	**BW/7**			
	TOTAL CARRIED TO GRAND SUMMARY				

BUILDERS WORKS

MAIN SUMMARY

BUILDERS WORKS
MAIN SUMMARY

SECTION NO.	BILL TITLE	PAGE NO.	AMOUNT
1	10,000 CAPACITY STADIUM	TCS/37	
2	GATE HOUSE	GH/18	
3	SENTRY BOXES	SB/16	
4	POWER HOUSE	PH/14	
5	BOUNDARY WALL AND GATES	BW/8	
	BUILDERS WORK TOTAL CARRIED TO GRAND SUMMARY		

CIVIL WORKS

GRAND SUMMARY		
Bill No.	Description	BoQ Amount (KSh)
1	Athlectic track facilities	-
2	Football Pitch	-
3	Foul Drainage	-
4	Storm water drainage	-
5	Parking Areas	-
	GRAND TOTAL	-

Bill No. 2 - ATHLETIC TRACK

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
	ATHLETIC TRACK WITH 8 COMPITING LANES				
2.1	**Site clearance and top soil stripping**				
	Note: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this bill of quantinties.No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage.Tenderers are therefore deemed to have included,in the unit rate entered against an item,for all cost and charges associated with haulage				
	Site clearance and backfilling				
	Topsoil stripping				
2.1.3	**Remove topsoil on the pitch to approved depth and cart away to spoil or stock pile for reuse as directed by the ngineer(Avarage depth=200mm)**	m^2	12905		-
2.2	**EARTHWORKS**				
	Note: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this bill of quantinties.No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage.Tenderers are therefore deemed to have included,in the unit rate entered against an item,for all cost and charges associated with haulage				
2.2.1	**Excavate exisiting ground to formations levels in soft and stock pile materials for re-use or spoil or as directed by the Engineer to depth not exceeding 0.6m**	m^3	7750		-
	SUBGRADE				
2.2.2	**Excavate material,transport over any distance,lay,water and compacted subgrade,all in accordance with the specifications or as directed by the Engineer.The rate to include all treatment required for the upper 300mm below formation both in cut and fill including compaction 100% MDD(AASHTO T99)-(min CBR 15%)**	m^3	7750		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-
	Cont'of Athletic Track				
2.3	**RUNNING TRACK**				
	BASE				
	No overhaul will be paid for separately under this item and the cost of hauling ewill be deemed to have been included in the rates.The rates inserted shall include for all cost for acquiring,site clearance,overburden removal,excavation and hauling to site.				

2.3.1	Provide,lay and compact hand packed approved stone to thickness of 250mm to 95% M.D.D (AASHTO T99),in compliance of standard specification-(CBR 80%) or as instructed by the Engineer	m^3	3227		-
2.3.1	Provide and lay 50mm thick quarry dust blinding to hardcore to receive concrete	m^2	7780		-
	Insecticides				
2.3.1	Premise 200cc insecticcides treatment to surfaces of blinding	m^2	7780		-
	Water proofing				
2.3.1	1000 gauge black sheet	m^2	7780		-
	Concrete working				
	Vibrate reinforced concrete class 20/20 (1:2:4)				
2.3.2	150mm thick ground slab to track and 'D' Both sides	m^2	7780		-
	Reinforcement				
2.3.3	BRC A142	m^2	7780		-
	TRACK EQUIPMENT				
2.3.5	Supply.delivery and installation 13.5mm thick,maroon in colour, prefabricated atheletic,all weather synthetic tartan track sytem,inclusive of adhesives and all require fixutures	m^2	5100		-
2.3.6	Provide,lay and join precast concrete channels (125x100mm) to external edge of the track	m	485		-
2.3.6	Supply special white polyurethane paint. Marking of the starting lines, end lines, relay lines e.t.c as per world athletics regulations	m	3600		-
2.3.6	Supply and installations of aluminium detachable kerbs	m	470		-
	STEEPLECHASE				
	Steeplechase water jump				
	As shown the drawings,				
2.3.7	Excavte for water jump	m^3	14.805		-
2.3.8	Provide and palce mass conrete of 1:3:6 as blinding	m^3	0.861		-
2.3.9	Provide and palce reinforced concrete of mix 1:1.5:3 as base slab of 200mm thick and edges walling of 200mm thick as shown in the drawings	m^3	5.934		-
2.4.0	Provide and palce A142 BRC MESH	m^2	29.67		-
2.4.1	Provide and palce formworking to externalsurfaces and internal surfaces face	m^2	20.75		-
2.4.2	Provide and palce permanently fix hurdle to steepchase water jump of 914mm high x3660mm wide in Timber	Item	1		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-
	Cont'of Athletic Track				
2.6	**HURDLE'S**				
	Provide standard portable adjaustable hurdle of minimuim height of 762mm heigh and maximum height of 1067mm (10 Nos Hurdle per competing lane)as per world althelicts standards				
2.6.1	Provide approved standard specification hurdle or as directed by the Engineer	Nos	90		-
	SHORT PUT FACILITY				
	The short put facility includes, a throwing circle, a stop board and landing sector.				
	Throwing Circle,2.5m diameter circle				

	Excavate gravel for 200mm oversite thick base material,haul,spread,compact to 95% M.D.D. (AASHTO T.180) and shape to level and tolerance to main runway,in compliance with the requirement of standard specification -(CBR 30%) or as	m^3	18.9		-
2.6.2	instructed by the Engineer				
2.6.3	Provide,lay and vibrate C25 Concrete,150mm thick to standard specification or as directed by the Engineer	m^3	0.7365		-
2.6.4	Provide,lay and fix BRC A142 Mesh fabric to standard specification or as directed by the Engineer	m^2	5		-
	Prime cost for surfaces finishing and marking,stop board white in colour (Made of wood,or suitable material in the shape of arc,1.22m long x0.112m wide x0.10m high) to standard specification of Discus and Hammer facility as per world althelicts	Item			-
2.6.5	standards		1		
2.6.6	Prime cost for Short put throw to standard specification,	Item	1		-
2.6.6	Supply and installations of hammer cage and anchorage to world althetic specfication	Item	1		-
	LONG AND TRIPPLE JUMPING				
	Long jump facility with runway of (80m long,4m wide),take-off board(1.22mx0.2mx0.1m) and landing area(2.75m wide x10m long)				
	Supply of long and tripple jump take off boards,inclusive of galvanized steel ,6 sets				
	Natural Base				
	Excavate gravel for 200mm oversite thick base material,haul,spread,compact to 95% M.D.D. (AASHTO T.180) and shape to level and tolerance to main runway,in compliance with the requirement of standard specification -(CBR 30%) or as	m^3	29		-
2.6.7	instructed by the Engineer				
2.6.8	Excavate depth of 400mm at landing area and fill with sand and shape to level and centerlized with main runway to standard specification or as instructed by the Engineer	m^3	24		-
	BASE				
	No overhaul will be paid for separately under this item and the cost of hauling ewill be deemed to have been included in the rates.The rates inserted shall include for all cost for acquiring,site clearance,overburden removal,excavation and hauling to site.				
	Provide,lay and compact hand packed approved stone to thickness of 250mm to 95% M.D.D (AASHTO T99),in compliance of standard specification-(CBR 80%) or as instructed	m^3	30		-
2.3.1	by the Engineer				
2.3.1	Provide and lay 50mm thick quarry dust blinding to hardcore to receive concrete	m^2	320		-
	Insecticides				
2.3.1	Premise 200cc insecticcides treatment to surfaces of blinding	m^2	320		-
	Water proofing				
2.3.1	1000 gauge black sheet	m^2	320		-
	Concrete working				
	Vibrate reinforced concrete class 20/20 (1:2:4)				
2.3.2	150mm thick ground slab to track and 'D' Both sides	m^2	320		-
	Reinforcement				
2.3.3	BRC A142	m^2	320		-
	TRACK EQUIPMENT				
	Supply.delivery and installation 13.5mm thick,maroon in colour, prefabricated atheletic,all weather synthetic tartan track	m^2			-
2.3.5	sytem,inclusive of adhesives and all require fixutures		320		
2.3.6	Provide,lay and join precast concrete channels (125x100mm) to external edge of the track	m	200		-

2.6.14	Prime cost for,Providing,lay and fix built in installation tray(In two location along the runway) made of corrosion-protected metal in which the take-off board can be correctly possitioned to standard specification oras directed by the Engineer	Item	2		-
2.6.15	Prime cost for,Provide,lay and fix white colour take-off board to standard specification or as directed by the Engineer	Item	2		-
2.6.16	Prime cost for,drain-off the long jump facility to standard specification or as directed by the Engineer	Item	2		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-
	POLE VAULT FACILITY				
	High jump facility includes two uprights,crossbar,planter box and landing area. The pole vault facility to be located within the surfaced 'D'				
2.7.13	Prime cost for two uprights,crossbar and pole vault to standard specifications	Item	2		-
2.7.14	Prime cost for,landing mats of 6m long x 6m wide x0.8m high to standard specification or as directed by the Engineer	Item	2		-
2.7.15	Prime cost for,construction of planter box with openable cover, finish to track surface finishes to standard specification or as directed by the Engineer	Item	2		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-
	Cont'of Athletic Track				
2.8	**DISCUS AND HAMMER THROW FACILITY**				
	The Discus and Hammer throw facility includes, a throwing circle, a protective cage and landing sector.				
2.8.1	Throwing Circle,2.5m diameter circle Excavate gravel for 200mm oversite thick base material,haul,spread,compact to 95% M.D.D. (AASHTO T.180) and shape to level and tolerance to main runway,in compliance with the requirement of standard specification -(CBR 30%) or as instructed by the Engineer	m^3	18.9		-
2.8.2	Provide,lay and vibrate C25 Concrete,150mm thick to standard specification or as directed by the Engineer	m^3	0.7365		-
2.8.3	Provide,lay and fix BRC A142 Mesh fabric to standard specification or as directed by the Engineer	m^2	5		-
2.8.4	Prime cost for surfaces finishing and marking to standard specification of Discus and Hammer facility or as directed to the Engineer	Item	1		-
2.8.5	Prime cost for Discus Disk and Hammer throw to standard specification or as directed to the Engineer	Item	1		-
2.8.6	Prime cost,provide,lay and fix steel proctective safety cage,6m minimum high to standard specification or as directed to the Engineer	Item	1		-
	JAVELIN THROW FACILITY				
	The Javelin throw facility includes,Runway (4m wide x36.5m long).throwing arc and landing sector.				
	Natural Base				
2.8.7	Excavate gravel for 200mm oversite thick base material,haul,spread,compact to 95% M.D.D. (AASHTO T.180) and shape to level and tolerance to main runway,in compliance with the requirement of standard specification -(CBR 30%) or as instructed by the Engineer	m^3	30		-
	BASE				

	No overhaul will be paid for separately under this item and the cost of hauling ewill be deemed to have been included in the rates.The rates inserted shall include for all cost for acquiring,site clearance,overburden removal,excavation and hauling to site.				
2.3.1	Provide,lay and compact hand packed approved stone to thickness of 250mm to 95% M.D.D (AASHTO T99),in compliance of standard specification-(CBR 80%) or as instructed by the Engineer	m^3	30		-
2.3.1	Provide and lay 50mm thick quarry dust blinding to hardcore to receive concrete	m^2	146		-
	Insecticides				
2.3.1	Premise 200cc insecticcides treatment to surfaces of blinding	m^2	146		-
	Water proofing				
2.3.1	1000 gauge black sheet	m^2	146		-
	Concrete working				
	Vibrate reinforced concrete class 20/20 (1:2:4)				
2.3.2	150mm thick ground slab to track and 'D' Both sides	m^2	146		-
	Reinforcement				
2.3.3	BRC A142	m^2	146		-
	TRACK EQUIPMENT				
2.3.5	Supply.delivery and installation 13.5mm thick,maroon in colour, prefabricated atheletic,all weather synthetic tartan track sytem,inclusive of adhesives and all require fixutures	m^2	146		-
2.3.6	Provide,lay and join precast concrete channels (125x100mm) to external edge of the track	m	200		-
2.8.13	Provide,lay and join precast concrete channels (125x250mm) to edges of AC along the track	m	68		-
2.8.14	Paint 0.07m wide,coloured white and curved with radius of 8m to throwing arc to standard specification or as directed by the Engineer	m^2	0.56		-
2.8.15	Prime cost for,javelin throwing pole to standard specification or as directed by the Engineer	Item	4		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	TOTAL CARRIED OVER TO GRAND SUMMARY				-

Bill No. 3 FOOTBALL PITCH

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
	FOOTBALL PITCH				
3.1	**EXCAVATION**				
	Rate to include for all trimming to levels, backfilling with approved selected spoil, compacting, disposal of surplus material and reinstatement of site.				
	Excavate oversite with respect to football pitch location in 3.1.1 normal soil for 200mm deep	m^2	7500		-
3.1.2	**Excavate In normal soil(cut/fill) to formatiions level to depth n.e 0.6m deep as directed by Engineer,stockpile good material for late top soiling of side slopes and lanscaping**	m^3	4500		-
3.2	**BACKFILLING**				
3.2.1	**Scarify water,fill in soft material and compact to 95% MDD(AASHTO) in layers of 150mm as directed by Engineer**	m^3	6930		-
3.2.2	**Provide,spread and compact 150mm topsoil for grass planting to slope of 1% to standard specification or as directed by the Engineer**	m^3	1740		-
	Grass planting				
	The area to be planted shall be cleared of all existing vegetation,roots,stones and the liki and then levelled to even slopes.Appropriate insecticides will then be sprayed over in accordance with manufacturer's instructions to destroy soil borne and leaf pest.Selected imported red soil shall be spared to depth of 150mm on to which shall be added a 25mm depth of dry well-rotted ani,mal manure and 25 grammes per square of phoaphate (8-16-8) all to the direction of the Engineer.				
	The whole shall then be lightly ritavated to obtain a homogeneous mixture,the soil raked smooth to fine a tilth and then thoroughly soaked with water.He grass shall be planted in cuttings approximately 200mm long and at 150mm deep.The grass shall be systematically cut,watered and weeded to maintain in a healthy state throughout the maintenance period.				
3.2.3	**Prepare ground,provide from approved source and plant,establish and maintain "kikuyu/bermuda" grass all as above described in the sports filed**	m^2	11600		-
	Pitch drainage				
	Laying of perforated uPVC underdrain rain gardens				
	The rates entered against the items in this section shall include for stripping top soil, excavation in trench material other than rock, compaction, laying with shuttering where necessary and refilling with specified size gravel and compacting up to the botom of the rain infiltration channel. Lay and joint pipes to correct line and level				
3.2.5	**Provide,lay, and joint in trenches 90mm uPVC pipes perforated dunderdrains pipe at 5m centres to football pitch, in trenches not exceeding 1.0m depth to standard specification**	m	1065		-

	Backfilling in pitch drains trenches				
3.2.6	Allow for backfilling of washed drainage layer (300mm thick crushed stone - 14/20 aggregates) to rain pitch infiltration channel	m^3	159.75		-
3.2.7	Allow for backfilling 50mm thick sand to rain pitch infiltration channel	m^3	15.975		-
3.2.8	Allow for placement of a geotextile membrane.	m^2	319.5		-
3.2.9	Provide,spread and compact 150mm topsoil for grass planting to slope of 1% to standard specification or as directed by the Engineer	m^3	47.925		-
3.3.0	**Goal Posts**				
3.3.1	Excavate for post hole size 500x500x750 mm deep,	m^3	0.375		-
3.3.2	Provide,lay and compact concrete class Q to within 100mm of ground level to goal post	m^3	0.325		-
3.3.3	Provide 1 set of goal post as per fifa approved standards	Item	1		-
3.3.5	Provide rugby post to standard specifications	1tem	1		-
3.3.5	Provide 4 number corner flags	1tem	1		-
3.4	**DRAINAGE**				
3.4.1	Provide and place below the ground UPVC drainage pipe(Golden Brown),200mm diameter at 15m interval on the invert drains to drain storm water to barrier trenches along the external edges	m	560		-
3.5	**Material Tests**				
3.5.1	Allow a Prime Cost sum of ksh 500,000 for External Material Testing at MOTI&PW - MTRD	P.C Sum	1	500,000	500,000
3.5.2	Add percentage adjustment for contractor's attendance, overheads and profits with respect to Item …..	%	10%	500,000	50,000
3.5.3	Provisional Sum for carrying out geotechnical surveys as instructed by the Engineer	Sum	1	1,000,000	1,000,000
3.5.4	Add percentage adjustment for contractor's attendance, overheads and profits with respect to Item …..	%	10%	1,000,000	100,000
3.5.5	Provision sum for contigencies and used as directed by Engineer	No.	1	1,000,000	1,000,000
	TOTAL CARRIED OVER TO GRAND SUMMARY				

Bill No. 4 -FOUL DRAINAGE SYSTEM

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
	FOUL DRAINAGE SYSTEM				
4.1	**EXCAVATIONS .**				
	Excavate mechanically trench for 160mm diameter uPVC pipe,support the sides, backfill after laying of pipes and cart away the excavated material.				
4.1.1	Depth to invert n.e 1.50m in soft material	m^3	585		-
4.1.2	Ditto, depth n.l.t 1.5m but n.e 3.0m in hard material(Natural gravel soil)	m^3	585		-
	PIPE LAYING.				
4.1.3	Provide lay and joint 160mm diameter,3.2mm wall thickness uPVC pipe with 100KPa pipe stiffness on compacted murram bedding as per detailed drawing No. (50)5310.Bedding Type "E"	m	1000		-
4.1.4	Provide and place 150mm thick concrete surround around pipes across the road,(mix 1:3:6) to detail(50)5310,including all necessary formwork,bedding type "B"	m^3	15		-
	MANHOLES.				
	Excavation				
	Exavate for rectangular Manholes,return fill and ram selected approved material after construction of manholes andcart away surplus				
4.1.5	Type "A" Manhole,depth to invert n.e 600mm from formalations level as per details drawing No.(50)5300	m^3	10		-
4.1.6	Ditto,but to Type "B" Manhole,depth to invert n.e 1000mm from formalations level as per details drawing No.(50)5301	m^3	41		-
4.1.7	Ditto,but to Type "C" Manhole,depth to invert n.e 1500mm from formalations level as per details drawing No.(50)5302	m^3	195		-
	Constructions				
	Provide, place,vibrate and treat the following concrete mixes including all form-work.				
	Concrete class P (mix 1:4:8)				
4.1.8	50mm thick concrete blinding to manholes bases Vibrated concrete class 15 (mix 1:3:6)	m^3	8		-
4.1.9	150mm RC concrete to the bases slab of manholes	m^3	15		-
	Vibrated concrete class 20 (mix 1:2:4)				
4.1.10	150mm RC concrete to the cover slab of manholes Ditto,but benching for 160mm diameter upvc pipe. Include forming the mains and branch channels as well as finishinh the benching to fall and building in the pipes as details in the drawings	m^3	14		-
4.1.11		m^3	15		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-

4.2	**Walling**				
	Provide,lay and joint 200mm thick dressed natural stone walling in mortar of 1:3 to manholes walls as follows				
4.2.1	Type "A" Manhole, as per details drawing No.(50)5300	m^2	12		-
4.2.2	Type "B" Manhole, as per details drawing No.(50)5301	m^2	48		-
4.2.3	Type "C" Manhole, as per details drawing No.(50)5302	m^2	157		-
	Mild Steel Reinforcement Bars to B.S 4449.				
	Provide, cut,bend and place T8 reinforcement bars to cover slab as per the specifications and drawings to;				
4.2.4	Type "A" Manhole, as per details drawing No.(50)5300	kg	105		-
4.2.5	Type "B" Manhole, as per details drawing No.(50)5301	kg	322		-
4.2.6	Type "C" Manhole, as per details drawing No.(50)5302	kg	675		-
	Step Iron				
	Provide and fix deep galvanized malleable iron as step iron to BS.1247as per detailed drawings to;				
4.2.7	Type "A" Manhole, as per details drawing No.(50)5300	No	10		-
4.2.8	Type "B" Manhole, as per details drawing No.(50)5300	No.	20		-
4.2.9	Type "C" Manhole, as per details drawing No.(50)5300	No	80		-
	Rendering				
4.2.10	Provide 12mm thick water proof cement and sand (mix 1:1) steel float finished rendering to walls	m^2	147		-
4.2.11	Ditto,but to cover slab	m^2	14		-
4.2.12	Provide 12mm thick water proof cement and sand (mix 1:1) rendering trowelled smooth to surface of benching	m^2	25		-
	Manholes cast iron covers				
4.2.13	Provide and fix 600x450mm medium duty C.I Manhole cover and frame to B.S 497	No	30		-
4.2.14	Provide and fix 600x450mm heavy duty C.I Manhole cover and frame to B.S 497	No	5		-
4.2.15	Allow for testing the whole foul drainage system during installation and again at completion of the works	Item	1		-
					-
4.30	**Excavation**				-
4.3.1	Excavate for bio-diegester	m^3	31		-
					-
4.3.2	Extra over for excavation in rock class I (Provisional)	m^3	62		-
					-
4.3.3	Backfill and ram around foundation	m^3	14		-
					-
4.3.4	Load and cart away surplus material.	m^3	80		-
					-
	Mass concrete class 15 in:-				-
4.3.5	50mm blinding to floor slab	m^3	2		-
					-
	Reinforced concrete class 25 in:-				-
4.3.6	200mm thick floor slab	m^3	5		-

					-
4.3.7	200mm Rienforced concrete walls	m^3	20		-
					-
4.3.8	200mm thick roof slab	m^3	4		-
					-
	Timber formwork-fair face to:-				-
4.3.9	Edges to floor slab	m^2	4		-
					-
4.3.10	Internal walling	m^2	135		-
					-
4.3.11	Sofit to roof slab	m^2	19		-
					-
	High Tensile Reinforcement to				-
BS4483 4.3.12 T10		kg	1,200		-
					-
4.3.13	T12	kg	1,125		-
					-
	Bio-digester				-
					-
in 4.3.14 p	Provide and install a bio-diegester for capacity of 250 persons, lace and test to Engineer approval from Bio-liff suppliers or equivalent approved ventor	Item	1	5,000,000	5,000,000
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				
	TOTAL CARRIED OVER TO GRAND SUMMARY				-

Bill No. 5 -STORM WATER DRAINAGE

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
5.1	**SLOTTED DRAINS**				
	Earth works				
5.1.1	Excavate from pitch formation level for slotted drain ditch to depth noe exceeding 1.5m in soft as directed by the Engineer	m^3	1147.5		-
5.1.2	Return , fill and ram selected excavated materials around slotted drains	m^3	405		-
	Concrete Works				
	Concrete class P (mix 1:4:8)				
	Provide,lay and place concrete to include water proof admixtures , and weep holes spaced at 1000mm c/c or as directed by the Engineer				
5.1.3	50mm thick concrete blinding to slotted drains	m^3	29.25		-
	Vibrated concrete class 20 (mix 1:2:4)				
5.1.4	150mm RC concrete to the slotted drains base slab	m^3	74.25		-
5.1.5	150mm RC concrete to the slotted drains side walls	m^3	162		-
5.1.6	150mm precast concrete cover to the slotted drains with two slots each size 400x50mm	m^2	450		-
	Formworks				
5.1.7	sides of the walls	m^2	1215		-
	Reinforcement				
5.1.8	T8 Bars	kg	4325		-
5.1.9	T10 Bars	kg	5675		-
5.2	**STORM WATER MANHOLE**				
	6 Nos Manholes for 450mm dia concrete drains pipes				
	Excavation				
	Exavate for precast ring manholes,return fill and ram selected approved material after construction of manholes and cart away surplus				
5.2.1	Excavate for stormwater manhole for depth not exceeding 2m	m^3	30.6		-
5.2.2	Return , fill and ram selected excavated materials around the manhole	m^3	9.36		-
5.2.3	Load and cart away surplus excavated material from site	m^3	21.24		-
	Constructions				
	Provide, place,vibrate and treat the following concrete mixes including all form-work.				
	Concrete class P (mix 1:4:8)				
5.2.4	50mm thick concrete blinding to manholes bases	m^3	0.603		-
	Vibrated concrete class 15 (mix 1:3:6)				
5.2.5	150mm RC concrete to the bases slab of manholes precast Ring manhole	m^3	1.809		-
5.2.6	Provide, lay and joint 150mm thick approved precast ring manhole,bedding and pointing in cement and sand mortar	m^2	56.64		-
	Vibrated concrete class 20 (mix 1:2:4)				
5.2.7	Ditto,but benching for 450mm diameter concrete pipe. Include forming the mains and branch channel as well as finishinh the benching to fall and building in the pipes as details in the drawings	m^3	10.179		-
5.2.8	150mm RC concrete cover slab for storm water manholes	m^3	1.593		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-

5.3	**Mild Steel Reinforcement Bars to B.S 4449.** **Provide, cut,bend and place T10 reinforcement bars to cover slab as per the specifications and drawings to;**				
5.3.1	**T10 bars to cover slab**	**kg**	**480**		**-**
	Step Iron **Provide and fix deep galvanized malleable iron as step iron to BS.1247as per detailed drawings to;**				
5.3.2	**Provide as per details drawing No.(50)5300**	**No**	**42**		**-**
	Manholes cast iron covers				
5.3.4	**Provide and fix 600x450mm medium duty C.I Manhole cover and frame to B.S 497**	**No**	**6**		**-**
5.4	**IBD DRAINS WITH GRATINGS** **Excavation** **Exavate for inverts open chanenels a long the Building,on 100mm natural gravel beding to approval**				
5.4.1	**Excavate for stormwater manhole for depth not exceeding 1m**	**m^3**	**1300**		**-**
5.4.2	**Excavate material,transport over any distance,lay,water and compacted 100mm subgrade,all in accordance with the specifications or as directed by the Engineer.**	**m^3**	**120**		**-**
5.4.3	**Load and cart away surplus excavated material from site**	**m^3**	**1300**		**-**
	Constructions **Provide, place,vibrate and treat the following concrete mixes including all form-work.** **Vibrated concrete class 15 (mix 1:3:6)**				
5.4.4	**100mm RC concrete to the bases slab and sides slab to the drain**	**m^3**	**250**		**-**
	Mild Steel Reinforcement Bars to B.S 4449. **Provide, cut,bend and place BRC A142 mesh to side and base slab as per the specifications and drawings to;**				
5.4.5	**A142 BRC Mesh**	**m^2**	**2250**		**-**
	Formworks				
5.4.6	**Fair face Formwork sides of the walls**	**m^2**	**3650**		**-**
	Gratings **Supply and fixed as follows;**				
5.4.7	**25x25x3 Angle section anchor at every 1m into side concrete**	**m**	**2600**		**-**
5.4.8	**25x3 MS plate to be welded to sides of gratings**	**m**	**150**		**-**
5.4.9	**25x25x2mm SHS welded to side MS plate to form gratings spaced @50mm c/c**	**m**	**15600**		**-**
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				**-**
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				**-**

5.5	**450mm dia CONCRETE DRAINS PIPE**				
	Excavation				
5.5.1	**Excavate for stormwater 450mm dia concrete pipe**	m^3	144		-
5.5.2	Return , fill and ram selected excavated materials around the manhole	m^3	144		-
5.5.3	Provide 450mm dia concrete pipe and lay to fall with 150mm concrete sorround to stand specification or as directed by the Engineer	m	20		-
	450mm dia culverts 8 Nos				
	Earth works				
5.5.4	Excavate for headwalls and side wings to inlet and outlet and for 450mm dia culverts for depth not exceeding 1.5m in soft as directed by the Engineer	m^3	172.8		-
5.5.6	Return , fill and ram selected excavated materials around the culverts	m^3	129.6		-
5.5.7	**Load and cart away surplus excavated material from site**	m^3	43.2		-
	Concrete Works				
	Concrete class P (mix 1:4:8)				
5.5.8	Provide,lay and place concrete to ias directed by the Engineer **50mm thick concrete blinding to culvert drains**	m^3	5.76		-
	Vibrated concrete class Q (mix 1:3:6)				
5.5.9	**150mm RC concrete to the base slab**	m^3	14.4		-
5.5.10	**150mm RC concrete to the wing walls**	m^3	28.8		-
5.5.11	**150mm RC concrete to the culverts surround**	m^3	31.68		-
	Formworks-Fair finish				
5.5.12	**sides of the walls**	m^3	226.56		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	TOTAL CARRIED OVER TO GRAND SUMMARY				-

Bill No. 6 -PARKING N ACCESS

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
	Parking works				
6.1	**Site clearance and top soil stripping**				
	Note: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this bill of quantinties.No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage.Tenderers are therefore deemed to have included,in the unit rate entered against an item,for all cost and charges associated with haulage				
	Site clearance and backfilling				
6.1.1	Clear of trees,hedges,bushes,vegetattion and deleterious materials	m^2	2400		-
6.1.2	**Stripping and grubbing**	m^2	2400		-
	Topsoil stripping				
6.1.3	Remove topsoil on roadway,junctions and accesses to approved depth and cart away to spoil or stock pile for reuse as directed by the ngineer(Avarage depth=200mm)	m^3	479		-
	EARTHWORKS				
	Note: All costs and charges connected with haulage are to be included within the unit rates entered by tenderers against the items described in this bill of quantinties.No separate items for overhaul are included in any section of this Bill and no additional payment whatsoever will be made for haulage.Tenderers are therefore deemed to have included,in the unit rate entered against an item,for all cost and charges associated with haulage				
6.1.4	Excavate exisiting ground to formations levels in soft and stock pile materials for re-use or spoil or as directed by the Engineer	m^3	718.5		-
	SUBGARDE				
6.1.5	Compact to 150mm depth of existing ground below fills and cuts to 95% MDD (AASHTO T99)	m^3	359.25		-
6.1.6	Excavate material,transport over any distance,lay,water and compacted subgrade,all in accordance with the specifications or as directed by the Engineer.The rate to include all treatment required for the upper 300mm below formation both in cut and fill including compaction 100% MDD(AASHTO T99)-(min CBR 15%)	m^3	718.5		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-

	NATURAL MATERIAL SUBBASE				
6.1.7	**No overhaul will be paid for separately under this item and the cost of hauling ewill be deemed to have been included in the rates.The rates inserted shall include for all cost for acquiring,site clearance,overburden removal,excavation and hauling to site. Excavate gravel for 200mm thick subbase material,haul,spread,compact to 95% M.D.D. (AASHTO T.180) and shape to level and tolerance to main carriageway,in compliance with the requirement of standard specification -(CBR 30%) or as instructed by the Engineer**	m^3	479		-
	BASE				
6.1.8	**No overhaul will be paid for separately under this item and the cost of hauling ewill be deemed to have been included in the rates.The rates inserted shall include for all cost for acquiring,site clearance,overburden removal,excavation and hauling to site. Provide,lay and compact hand packed approved stone to thickness of 250mm to 95% M.D.D (AASHTO T99),in compliance of standard specification-(CBR 80%) or as instructed by the Engineer**	m^3	600		-
	Cabro Pavement				
	Provide,lay and compact 80mm thick heavy duty interlocking paving blocks min strength 49N/mm2	m^2	2400		-
6.1.9	**Provide,lay and join precast concrete kerbs (125x250mm) to edges and inside of along the track**	m	900		-
6.1.10	**Provide,lay and join precast concrete channels (125x250mm) to edges and inside of along the track**	m	750		-
	PARKING FURNITURES				
	Provide and erect permanent roads signs where insstructed by the Engineer and in accordance with the special specifications clause 2004 as follows				
6.1.11	**a) Warning signs**	**No.**	**10**		-
6.1.12	**b) Priority,prohibitory and mandatory signs**	**No.**	**10**		-
6.1.13	**c) Standard informatory signs**	**No.**	**10**		-
6.1.14	**d) Non standard informatory signs**	**No.**	**10**		-
6.1.15	**Paint 0.1m wide yellow line on the parking areas**	m^2	**120**		-
6.1.16	**Paint 0.1m wide yellow centerline on the parking areas**	m^2	**22**		-
6.1.17	**Paint 0.5m wide yellow line for pedestrian crossing,2.5m wide**	m^2	**0**		-
6.1.18	**Provide,lay and join precast concrete kerbs a)Straight**	m	575		-
6.1.19	**Provide and paint white reflective paint every alternative section of road kerbs**	m	575		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	SUB-TOTAL CARRIED FORWARD FROM PREVIOUS PAGE				-

6.2	**CONCRETE PAVING BLOCKS ON WALKWAYS** **Site clearance and backfilling** clear the site within the walkway road resrve,including removal of trees,hedges,bushes,and other vegetation or deleterious organic material,and back filling of holes left by removal of stumps and roots using approved material to 100% MDD(AASHTO T99),in accordance with the specification				
6.2.1	Clear of trees,hedges,bushes,vegetattion and deleterious materials	m^2	1386		-
6.2.2	Stripping and grubbing	m^2	1386		-
6.2.3	**Topsoil stripping** Remove topsoil on roadway,junctions and accesses to approved depth and cart away to spoil or stock pile for reuse as directed by the ngineer(Avarage depth=200mm)	m^3	154		-
	EARTHWORKS				
6.2.4	Excavate exisiting ground to formations levels in soft and stock pile materials for re-use or spoil or as directed by the Engineer	m^3	231		-
6.2.5	**BASE** Compact to 150mm depth of existing ground below fills and cuts to 95% MDD (AASHTO T99)	m^3	115.5		-
6.2.6	Provide,lay and compact 60mm thick medium duty concrete paving blocks (minimu 35N/mm2) on a 50mm sand bedding as per drawings or instructed by the Engineer on walksways	m^3	1386		-
6.2.7	Provide,lay and join precast concrete channels (125x250mm) to edges and inside of along the track	m	1000		-
	SUB-TOTAL CARRIED FORWARD TO NEXT PAGE				-
	TOTAL CARRIED OVER TO GRAND SUMMARY				-

ELECTRICAL INSTALLATION WORKS

THE PROPOSED 15K SEATER ATHLETICS/FOOTBALL STADIUM

SCHEDULE 1: CONTRACT PRELIMINARIES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	**Descripancies clause 1.02**				
2	**Conditions of sub-contract Agreement clause 1.03**				
3	**Payments clause 1.04**				
4	**Site location clause 1.06**				
5	**Scope of contract works clause 1.08**				
6	**Extent of contractors duties clause 1.09**				
7	**Firm price contract clause 1.12**				
8	**Variation clause 1.13**				
9	**Prime cost and provisional sum clause 3.14 (insert profit and attendance which is a percentagfe of expended PC or provisional sum**				
10	**Bond clause 1.15**				
11	**Governement legislation and regulations clause 1.16**				
12	**Import duty and VAT clause 1.17 (Note thisclause applies for materials supplied only VAT will also be paid by the subconstractors as allowed in the sumary page)**				
13	**Insurance company fees clause 1.18**				
14	**Provision of servivces by the Main contractor clause 1.19**				
15	**Samples and materials general clause 1.21**				
16	**Supplies clause 1.20**				
17	**Bills of quantities clause 1.23**				
	Sub total carried to next page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	total carried from previous page				
18	Contractors office in kenya clause 1.24				
19	Builders work clause 1.25				
20	Setting to work and regulating system clause 1.29				
21	Indentification of plant components clause 1.30				
22	Working drawings clause 1.32				
23	Records Drawings (As Installed) and instructions clause 1.33				
24	Maintenance Manual clause 1.34				
25	Hand over clause 1.35				
26	Painting clause 1.36				
27	Testing and inspection - manufactured plant clause 1.38				
28	Testing and instpection - installation clause 1.39				
29	Storage of materials clause 1.41				
30	Initial Maintenance Clause 1.42				
31	Attendance Upon Trandesmen etc (Insert percentage only) clause 1.58				
32	Local and other authorities notice clause 1.60				
33	Temporary works clause 1.63				
34	Patent Rights clause 1.64				
35	Mobilization and Demobilization clause 1.65				
	Sub total carried to next page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	total carried from previous page				
36	Extended preliminaries clause 1.66 (see Appendix - clause 1.70)				
37	Supervision by Engineer and site meetings clause 1.67				
38	Allow for profit and attendance for the above (Item 37)				
39	Amendment to scope of subcontract works clause 1.68				
40	Contract obligation and employers obligation clause 1.69				
	TOTAL CARRIED FORWARD TO GRAND SUMMARY PAGE				

ELECTRICAL WORKS FOR THE PROPOSED 15K SEATER ATHLETICS/FOOTBALL STADIUM					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE (KSH)**	**AMOUNT (KSH)**
	GROUND FLOOR				
	SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-LIGHTING POINTS				
	i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper				
A	**cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.**	**No.**	**443**		
	ii) Ditto as in item No. 2.01 but for two way switching	**No.**	**15**		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	**No.**	**1**		
B	**Supply and install the following;**				
	a) 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-				
	i) 10A one gang one way switch	**No.**	**71**		
	ii) 10A three gang one way switch	**No.**	**1**		
	i) 10A one gang two way switch	**No.**	**4**		
	b) Occupancy sensor complete with associated wiring as described in particular specification for washrooms	**No.**	**12**		
	c) Wall mounted 10A, 80lux dusk to dawn photocell switch complete with an override switch that comply with the standard EN 60947-1, EN 61000-3, EN 61000-6	**No.**	**1**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
C	**LIGHTING FITTINGS**				
	a) TYPE A	**No.**	**76**		
	b) TYPE B	**No.**	**107**		
	c) TYPE C	**No.**	**168**		
	d) TYPE D	**No.**	**51**		
	d) TYPE E	**No.**	**4**		
	f) TYPE F	**No.**	**28**		
	g) TYPE G	**No.**	**24**		
	h) TYPE EXIT 1	**No.**	1		
	g) TYPE W	**No.**	**14**		
	i) TYPE H	**No.**	**2**		
	POWER AND SOCKET OUTLET POINTS				
D	**13A SP socket point completely wired in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.**	**No.**	**145**		
E	**Socket Outlet plates**				
	i) 13A SP twin switched socket outlet as MK or approved equivalent.	**No.**	**145**		
F	**Hand Dryer power point completely wired in 3 x 2.5 mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories**	**No.**	**0**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY		
	Total B/F from Previous Pg.				
	DATA AND TV POINTS				
G	**Data point comprising of drawn wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover No. 75 but excluding the Data socket outlet.**				
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	POWER RETICULATION AND DISTRIBUTION BOARDS				
K	**4 ways DISTRIBUTION BOARD TPN C/W 125A integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.**	**No.**	**2**		
	4 ways SP CONSUMER UNIT, but excluding the MCBs ,and as Schneider Electric or equivalent.	**No.**	**4**		
	ditto but 12 ways	**No.**	**4**		
L	**MCBs for item above as Schneider Electric Acti 9**				
	i)10 A SP MCB	**No.**	**20**		
	ii)32 A SP MCB	**No.**	**8**		
M	**Sub-mains circuits for above comprising of 3 x 6 mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard .(Actual length to be determined by the P.E)**	**LM**	**50**		
	i) Cable glands for above cable				
N	**Allow for labelling the distribution boards under this section including all the incoming and outgoing circuits as per the specifications**	**Item**	**1**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	Supply, deliver, install and commission a complete Fire Detection and Alarm system, IP addressable type and in accordance with BS 5839				
O	**1 Loop Addressable fire detection and alarm panel complete with 72 hour stand by batteries, zone indicator lights, test and reset buttons and supervisory buzzer as Honewell or equal and approved equivalent.**	**No.**	**2**		
P	**Photoelectric Smoke detector point completely wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.**	**No.**	**16**		
Q	**Photoelectric Heat detector point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Detector Unit.**	**No.**	**4**		
R	**Electronic Sounder and Beacon point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Sounder and Beacon Unit.**	**No.**	**2**		
S	**Call point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the call unit.**	**No.**	**2**		
T	**Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as Honeywell or approved equivalent.**	**No.**	**2**		
U	**Addressable photoelectric smoke detector as Honeywell or equal and approved.**	**No.**	**16**		
V	**Addressable heat detector as Honeywell or equal and approved.**	**No.**	**4**		
	Addressable resettable Manual call point unit as MENVIER or approved equivalent .	**No.**	**2**		
	Total for GROUND FLOOR c/f to Collection Page				

ITEM	DESCRIPTION	UNIT	QTY		
	FIRST FLOOR **SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-**				
	LIGHTING POINTS				
A	**i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.**	**No.**	**160**		
	ii) Ditto as in item No. 2.01 but for two way switching	**No.**	**15**		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	**No.**	**2**		
B	**Supply and install the following;** **a) 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-**				
	i) 10A one gang one way switch	**No.**	**25**		
	ii) 10A two gang 1 way switch	**No.**	**2**		
	ii) 10A three gang 1 way switch	**No.**	**1**		
	b) Occupancy sensor complete with associated wiring as described in particular specification	**No.**	**4**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
C	**LIGHTING FITTINGS**				
	a) TYPE A	**No.**	**12**		
	b) TYPE B	**No.**	**83**		
	c) TYPE C	**No.**	**25**		
	d) TYPE D	**No.**	**36**		
	d) TYPE E	**No.**	**4**		
	f) TYPE F	**No.**	**11**		
	g) TYPE H	**No.**	**2**		
	h) TYPE EXIT 1	**No.**	**2**		
	l) TYPE W	**No.**	**14**		
	POWER AND SOCKET OUTLET POINTS				
D	**13A SP socket point completely wired in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.**	**No.**	**51**		
E	**Socket Outlet plates**				
	i) 13A SP twin switched socket outlet as MK or approved equivalent.	**No.**	**51**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	DATA AND TV POINTS				
G	**Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the Data socket outlet.**	**No.**	**31**		
H	**Television cord outlet points comprising 25mmØ HG PVC conduits complete with all accessories and blanking cover but excluding co-axial socket outlet as M.K or Approved Equivalent for the restaurant**	**No.**	**1**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	POWER RETICULATION AND DISTRIBUTION BOARDS				
K	**4 ways DISTRIBUTION BOARD TPN C/W 125A integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.**	**No.**	**2**		
L	**MCBs for item above as Schneider Electric Acti 9**				
	i)10 A SP MCB	**No.**	**6**		
	ii)32 A SP MCB	**No.**	**4**		
	iii) Blanking plates	**No.**	**14**		
M	**Sub-mains circuits for above comprising of 3 x 6mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard**	**LM**	**50**		
	i) Cable glands for above cable				
	Allow for labelling the distribution boards under this section including all the incoming and outgoing circuits as per the specifications	**Item**	**1**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
N	**Supply, deliver, install and commission a complete Fire Detection and Alarm system, IP addressable type and in accordance with BS 5839**				
O	**Photoelectric Smoke detector point completely wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.**	**No.**	**12**		
P	**Photoelectric Heat detector point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Detector Unit.**	**No.**	**2**		
Q	**Electronic Sounder and Beacon point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Sounder and Beacon Unit.**	**No.**	**2**		
R	**Call point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the call unit.**	**No.**	**2**		
	Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as Honeywell or approved equivalent.	**No.**	**2**		
S	**Addressable photoelectric smoke detector as Honeywell or equal and approved.**	**No.**	**12**		
T	**Addressable heat detector as Honeywell or equal and approved.**	**No.**	**2**		
U	**Addressable resettable Manual call point unit as MENVIER or approved equivalent .**	**No.**	**2**		
	Total for FIRST FLOOR c/f to Collection Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	SECOND FLOOR **SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-**				
	LIGHTING POINTS				
A	**i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.**	**No.**	**95**		
	ii) Ditto as in item No. 2.01 but for two way switching	**No.**	**0**		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	**No.**	**1**		
B	**Supply and install the following;** **a) 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-**				
	i) 10A one gang one way switch	**No.**	**9**		
	b) Occupancy sensor complete with associated wiring as described in particular specification	**No.**	**2**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
C	**LIGHTING FITTINGS**				
	a) TYPE A	**No.**	**4**		
	b) TYPE B	**No.**	**22**		
	c) TYPE C	**No.**	**15**		
	d) TYPE D	**No.**	**38**		
	e) TYPE E	**No.**	**16**		
	g) TYPE EXIT 1	**No.**	**1**		
	h) TYPE F	**No.**	**3**		
	I) TYPE W	**No.**	**14**		
	POWER AND SOCKET OUTLET POINTS				
D	**13A SP socket point completely wired in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.**	**No.**	**25**		
E	**Socket Outlet plates**				
	i) 13A SP twin switched socket outlet as MK or approved equivalent.	**No.**	**25**		
F	**Hand Dryer power point completely wired in 3 x 2.5 mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories**	**No.**	**2**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	DATA AND TV POINTS				
G	**Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the Data socket outlet.**	**No.**	**12**		
H	**Television cord outlet points comprising 25mmØ HG PVC conduits complete with all accessories and blanking cover but excluding co-axial socket outlet as M.K or Approved Equivalent for VVIP lounges**	**No.**	**2**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	POWER RETICULATION AND DISTRIBUTION BOARDS				
K	**4 ways DISTRIBUTION BOARD TPN C/W 125A integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.**	**No.**	**1**		
L	**MCBs for item above as Schneider Electric Acti 9**				
	i)10 A SP MCB	**No.**	**4**		
	ii)32 A SP MCB	**No.**	**7**		
	iii) Blanking plates	**No.**	1		
M	**Sub-mains circuits for above comprising of 3 x 4 mm2 single core PVC insulated copper cables drawn in 20 mm heavy gauge conduits and running from the LV switchboard**	**LM**	**20**		
	i) Cable glands for above cable				
	Allow for labelling the distribution boards under this section including all the incoming and outgoing circuits as per the specifications	**Item**	**1**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
N	**Supply, deliver, install and commission a complete Fire Detection and Alarm system, IP addressable type and in accordance with BS 5839**				
O	**Photoelectric Smoke detector point completely wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.**	**No.**	**5**		
P	**Photoelectric Heat detector point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Detector Unit.**	**No.**	**0**		
Q	**Electronic Sounder and Beacon point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Sounder and Beacon Unit.**	**No.**	**2**		
R	**Call point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the call unit.**	**No.**	**2**		
	Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as Honeywell or approved equivalent.	**No.**	**2**		
S	**Addressable photoelectric smoke detector as Honeywell or equal and approved.**	**No.**	**5**		
T	**Addressable heat detector as Honeywell or equal and approved.**	**No.**	**0**		
U	**Addressable resettable Manual call point unit as MENVIER or approved equivalent .**	**No.**	**2**		
	Total for SECOND FLOOR c/f to Collection Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	THIRD FLOOR **SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-**				
	LIGHTING POINTS				
A	**i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.**	**No.**	**88**		
	ii) Ditto as in item No. 2.01 but for two way switching	**No.**	**6**		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	**No.**	**6**		
B	**Supply and install the following;** **a) 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-**				
	i) 10A one gang one way switch	**No.**	**9**		
	b) Occupancy sensor complete with associated wiring as described in particular specification	**No.**	**2**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
C	**LIGHTING FITTINGS**				
	a) TYPE A	**No.**	**4**		
	b) TYPE B	**No.**	**34**		
	c) TYPE C	**No.**	**15**		
	d) TYPE D	**No.**	**38**		
	e) TYPE F	**No.**	**3**		
	g) TYPE EXIT 1	**No.**	**1**		
	h) TYPE W	**No.**	**14**		
	POWER AND SOCKET OUTLET POINTS				
D	**13A SP socket point completely wired in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.**	**No.**	**22**		
E	**Socket Outlet plates**				
	i) 13A SP twin switched socket outlet as MK or approved equivalent.	**No.**	**22**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	DATA AND TV POINTS				
G	**Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover No. 4 but excluding the Data socket outlet.**				
H	**Television cord outlet points comprising 25mmØ HG PVC conduits complete with all accessories and blanking cover but excluding co-axial socket outlet as M.K or Approved Equivalent**	**No.**	**0**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
	POWER RETICULATION AND DISTRIBUTION BOARDS				
K	**4 ways DISTRIBUTION BOARD TPN C/W 125A integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.**	**No.**	**1**		
L	**MCBs for item above as Schneider Electric Acti 9**				
	i)10 A SP MCB	**No.**	**4**		
	ii)32 A SP MCB	**No.**	**6**		
	iii) Blanking plates	**No.**	**2**		
M	**Sub-mains circuits for above comprising of 3 x 4 mm2 single core PVC insulated copper cables drawn in 20 mm heavy gauge conduits and running from the LV switchboard**	**LM**	**20**		
	i) Cable glands for above cable				
	Allow for labelling the distribution boards under this section including all the incoming and outgoing circuits as per the specifications	**Item**	**1**		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
N	**Supply, deliver, install and commission a complete Fire Detection and Alarm system, IP addressable type and in accordance with BS 5839**				
O	**Photoelectric Smoke detector point completely wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.**	**No.**	**5**		
P	**Photoelectric Heat detector point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Detector Unit.**	**No.**	**0**		
Q	**Electronic Sounder and Beacon point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Sounder and Beacon Unit.**	**No.**	**2**		
R	**Call point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the call unit.**	**No.**	**2**		
	Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as Honeywell or approved equivalent.	**No.**	**2**		
S	**Addressable photoelectric smoke detector as Honeywell or equal and approved.**	**No.**	**5**		
T	**Addressable heat detector as Honeywell or equal and approved.**	**No.**	**0**		
U	**Addressable resettable Manual call point unit as MENVIER or approved equivalent .**	**No.**	**2**		
	Total for THIRD FLOOR c/f to Collection Page				

Collection Page

ITEM	DESCRIPTION	AMOUNT
1	**Total Amount for Ground Floor**	
2	**Total Amount for First Floor**	
3	**Total Amount for Third Floor**	
	TOTAL C/F TO PRICE COLLECTION PAGE	

STADIUM LIGHTING

Item	Description	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
A	**Supply, Install, test and commission the following :**				
i	**6M Stadium mast pole complete with light fifture mess for 25 (No.) in 5x5 grid light fittings to be mounted on the roofing frame as per the Architect and structural engineer's design.**	**No.**	**6**		
ii	**220-277v 1000W LED stadium light with an efficacy of 150lm/W, IK10,IP66 with DALI Intelligent Control, CCT 2700-6500K and life span of 80,000 hours. The fixtures should have intergrated Surge Protection and working temperature -40°C to +50°C**	**No.**	**150**		
iii	**Lighting point completely wired in 1x25 mm2 two core +4mm2 earth PVC insulated copper cables drawn in 32 mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.**	**No.**	**6**		
iii	**1No. 125A SPN MCCB C curve for each circuit as SHNEIDER,ABB or approved equivalent.**	**No.**	**6**		
iv	**Any other item to complete installation of the above i) ii)**	**Item**	**1**		
	TOTAL FOR Stadium lighting C/F TO GRAND SUMMARY PAGE				

IP CCTV WORKS					
Item	**Description**	**Qty**	**Unit**	**Rate**	**Kshs.**
A	**Supply, Install, Test, integration and Commission the following as described in the specifications:**				
i	**CCTV CAMERAS AND POE EXTENDER**				
i	**a) Outdoor, 4k IP67 , 120 dB WDR technology Vandal resistant Dome camera complete with housing, appropriate mounting brackets and all other accessories to engineers approval as Hikvision or Approved Equivalent**	**14**	**No.**		
	b) "ditto" but with Pan and tilt ability and 25x optical zoom	**8**	**No.**		
	c) 2 Port PoE Extender PoE+ Repeater 100 Meters(328 ft) Extender 1 in 2 Out Comply IEEE 802.3af/at Standard 10,100Mbps for Security PoE Camera Over Cat5/Cat6 or UTP Cables	**66**	**No.**		
ii	**Cat 6A UTP 4-pair cable as Siemons or approved equivalent**	**300**	**M**		
iii	**32 Channels IP Network video recorder with 32 PoE/PoE+ ports and HDD 4TB with H.265+/H.265/H.264+/H.264 video formats support, Intelligent analytics based on deep learning algorithm,Up to 16/32-ch IP camera inputs,Up to 16-ch 1080p decoding capability as Hikvison or equal and approved equivalent**		**2 No.**		
iv	**50" LED HD panel display as described in particular specifications complete with necessary accessories**	**2**	**No.**		
v	**Desktop PC, Core i7 13400, 8 GB DDR4-3200 MHz RAM (1 x 8 GB), 1TB NVMe™ M.2 SSD**		**2 No.**		
vi	**Any other items necessary to complete the above installation as per the system you propose to install. Please list the items, price and include in your totals a) b) c)**		**1 Item**		
	Total C/F to Summary Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-				
	HORIZONTAL CABLING				
A	**i) RJ45 Cat 6A UTP Single Data Faceplates complete with Keystone 45° Exit and Label as SIEMON or Approved Eqivalent.**	**No.**	**110**		
B	**3M RJ45 - RJ45 Cat 6A UTP Factory Terminated Patch Cord as SIEMON or Approved Equivalent for Telephone.**	**No.**	**0**		
C	**1M RJ45 - RJ45 Cat 6A UTP Factory Terminated Patch Cord as SIEMON or Approved Equivalent for Workstation.**	**No.**	**110**		
D	**1M RJ45 - RJ45 Cat 6A UTP Factory Terminated Patch Cord as SIEMON or Approved Equivalent for Cabinet Use.**	**No.**	**110**		
E	**Cat 6A UTP Cable as SIEMON or Approved Equivalent pulled between Cabinet and Outlet Plates.**	**LM**	**3300**		
	DATA CABINET				
F	**12 U Wall mounted, Network Cabinet as Described in the Particular Specifications as SIEMON or Approved Equivalent.**	**No.**	**4**		
G	**48 Port Patch panel as SIEMON or Approved Equivalent.**	**No.**	**4**		
H	**Cable Managers as SIEMON or Approved Equivalent.**	**No.**	**4**		
I	**240V, 50Hz 3000VA,APC smart un-interupted power supply unit (UPS) with USB and Serial Port as APC or Approved Equivalent.**	**No.**	**4**		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
i)	**Total B/F from Previous Pg.**				
	SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-				
	ACTIVE COMPONENTS				
A	**Network Switches** **i) 48 port 5G/2.5G/1G/100M multigigabit, 60W PoE. 40G, 25G, 10G, 1G fiber and 10G copper modular uplink PoE Switch with modular uplink configuration, as Cisco catalyst 9300 series or Approved equivalent**	**No.**	**4**		
	BACKBONE CABLING				
C	**SFP Fibre Modules as SIEMON or Approved Equivalent**	**No.**	**8**		
	8 core Armoured fibre optic cable for interwiring the network switches.	**LM**	**400**		
D	**Any other items necessary to complete the above installation as per the system proposal. Please list the items, price and include in your totals a) Lot 1 b)** **c)…**				
	TOTAL AMOUNT FOR STRUCTURED CABLING CARRIED FORWARD TO GRAND SUMMARY PAGE				

250 KVA GENERATOR SET

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
A	**Supply, deliver to site, install, test and commission a Prime-Rated 250KVA 3 phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging and as fully described in the particular specifications. The generator set is to be complete with a sound attenuated canopy and an integral base/belly daily service fuel tank**	**1**	**No.**		
B	**Supply, deliver to site and install a steel exhaust pipe of not less than 14 SWG and of adequate diameter running from the generating set to the outside of the generator house**	**10**	**LM**		
C	**Connect the exhaust pipe above in item 1.2 using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer**	1	**Item**		
D	**Complete earthing of generating set to electrical engineer's approval**	1	**Item**		
E	**Allow for training of client's staff on the operation and maintenance of the generating set.**	1	**Item**		
F	**Allow for testing and commissioning with the generator set's tank full of fuel**	1	**Item**		
G	**Allow for bench test for full load test at the supplier's workshop**	1	**Item**		
				SUB-TOTAL FOR GENERATING SET C/F TO SUMMARY PAGE	

AMF CONTROL PANEL

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
H	**Supply, deliver to site, install, test and commission the following:**				
i	**An electrical control panel complete with incoming MCCBs and contactors for automatic change over operation and complete with all other control accessories as fully described the particular specifications**	**1**	**No.**	**suitable-rated**	
ii	**250A rated manual by-pass switch with clearly labeled NORMAL-OFF-BYPASS positions, and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start**	**1**	**No.**		
iii	**240V AC/12V DC mains power supply trickle battery charger as specified in the specifications. The trickle charger shall charge the battery when the set is on IDLE mode, otherwise when the set is RUNNING, the battery shall be charged by the generator charger. Wiring shall be done such that the two chargers shall not operate at the same time.**	**2**	**No.**		
iv	**12 volts battery as specified in the particular specifications**	**2**	**No.**		
v	**Amoured cables complete with glands and pvc sleeves:**				
vi	**(a) 2.5mm^2, 4 core, PVC/SWA/PVC copper cable**	**50**	**LM**		
vii	**Interwire the control panel with the Mains L.V board**	**1**	**Item**		
	SUB-TOTAL FOR AMF CONTROL PANEL C/F TO PRICE SUMMARY PAGE				

RECOMMENDED SPARE PARTS AND LUBRICATORS

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	For the supply to the site of the following spare parts and lubricators:				
i	Oil Filters	No.	4		
ii	Air Filters	No.	4		
iii	Fuel Filters	No.	4		
iv	Set of Fan belts to suit the set	No.	1		
v	10 litres container of sump oil of grade..... *	No.	1		
vi	2 kilogram grease in a tin of grade ..... *	No.	1		
vii	10 litre plastic container of distilled water	No.	1		
viii	20 litre of engine oil in a tin of grade ..... *	No.	1		
ix	Supply and deliver to site generator diesel with a capacity to run the generator for 24 hours	ltrs	1000		
x	Any other spare parts recommended by Tenderer **				
	*The tenderer to fill in the Grade quality to be supplied				
	**The tenderer to fill in the details and price of items but the price not to be included in total carried forward to summary page				
	SUB-TOTAL FOR SPARE PARTS C/F TO PRICE SUMMARY PAGE				

TOOLS TO BE SUPPLIED WITH THE SET

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	**For the supply to site of the following tools:**				
i	**Metal tool box with lock and two keys**		1		
ii	**Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set**		1		
iii	**Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type**		1		
iv	**- ditto -but open ended spanners**		1		
v	**Set of feeler gauges**		1		
vi	**Grease gun to suit greasing points**		1		
vii	**Oil can, trigger type**				
viii	**Any other special tools which the tenderer recommends should be purchased as an optional:***		1		
	NOTE* Tenderer should give detail and prices of item 4.8 but the price not to be included in total carried forward.				
ix	**Supply initial diesel fuel to fill the auxilliary tank in item 4.1 above, state the number of litres to be supplied--------(ltrs) and price per litre ……..(price per ltrs in Kshs)**	**Ltrs**	**500**		
	SUB-TOTAL FOR TOOLS C/F TO PRICE SUMMARY PAGE				

250 KVA GENSET SUMMARY PAGE

Item	Description QTYUNIT RATE	Amount (Kshs)
i	Sub-Total for Generating Set	
ii	Sub-Total for AMF Panel	
iii	Sub-Total for Recommended Spare Parts and Lubricators	
iv	Sub-Total for Tools to be Supplied with the Set	
TOTAL CARRIED FORWARD TO GRAND SUMMARY PAGE		

EXTERNAL SOLAR LIGHTING

Item	Description	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
A	**Supply, Install, test and commission the following :**				
i	**7m high (6m above ground height) double Arm Street Lighting Pole with 1 Metre out-reach arms, support mechanism, mounting brackets for 1No. PV solar panel and mounting brackets for the integrated light fitting. The pole shall be located in the ground in a concrete foundation suitable of withstanding wind gusts of No. upto 200 km/hr .The column and the luminaire bracket shall be of hot dip galvanised high quality steel (and shall allow for the foundation depth of 1000mm).**		14		
ii	**a) All in One 1000w Solar Street Light with specially designed and optimized with EV (Electric Vehicle) grade battery, this solar endurance light capable of storing very high power capacity (30,000 mAh) and supporting the charging / discharging time up to 80,000 Hours as philips or equal and approved equivalent**	**No.**	**28**		
iii	**Excavate holes to take the metallic columns above, average 1,000mm deep and 600mm diameter, install columns, backfill with concrete mix and compact to natural ground level. The foundation should be suitable of withstanding wind gusts of upto 200 km/hr with all accessories of solar pannel, and integrated street light).**	**No.**	**14**		
iv	**Earthing, for the street lighting system to electrical engineer's approval**	**No.**	**1**		
vi	**Any other item to complete installation of the above** **i)** **ii)**	**Item**	1		
	TOTAL FOR EXTERNAL SOLAR LIGHTING C/F TO GRAND SUMMARY PAGE				

POWER DISTRIBUTION

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
A	**MEDIUM VOLTAGE EQUIPMENT** **Free standing,compartmentalized,front access lockable Switchgear with 1No. 200A TP + N + E busbars, Digital**				
¡	**439-1. The switchgear shall be powder coated, degree of protection IP65,modular type fabricated from steel frames and sheet steel 14swg with BMS interface points as Power Technics or equal and approved complete with the following:** **a) Incoming** **i) 1No. 250A TPN ACB with Shunt Trip as SHNEIDER, ABB or approved equivalent.** **ii) 1No. Appropriate size Voltmeter plus selector switch.** **iii) 1No. Appropriate size Ammeter plus selector switch with C.T.s** **iv) 3No. Phase indicating lights** **v) 1No. Power factor meter** **vi) All power system parameters (KW, KVA, KWHr, KVArs, Frequency, P.F., harmonics etc.). The multimeter should be complete with selector switches for viewing/displaying the various parameters.** **b) Outgoing** **i) 1 No. 120A Adj 07-1i TPN MCCB feeder to the Sub LV Boards at each wing as SHNEIDER,ABB or approved equivalent.** **ii) 1No. 150A TPN MCCB feeder for the PFC as SHNEIDER,ABB or approved equivalent.** **iii) A suitably rated 415V three-phase surge diverter as Furse ESP 415, fully wired, complete with enclosure with viewing window.** **iv) 1No. 150A TPN MCCB feeder for spare as SCHNEIDER,ABB or approved equivalent.**	**1**	**Item**		
	Sub-Total C/F to the Next Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Sub-Total B/F from Previous Page				
	c) Carry out comprehensive labeling of all the bus bars. CT chambers, circuit breakers etc. above, indicating the areas served, outgoing cable sizes etc.	1	Lot		
	d) Carry out concise load balancing to achieve a maximum imbalance not greater than ± 10% between any two phases, measured at the Main LV switchboard	1	Lot		
B	**LV SUB-BOARD**				
i	**LV SUB-BOARD for each wing manufactured to BS EN60 439-1 standards with 1No. 250A TP + N + E busbars, ;The subboard shall be powder coated, degree of protection IP65,modular type fabricated from steel frames and sheet steel 14swg as Power Technics or equal and approved complete with the following:**	**2**	**No.**		
	a) Incoming				
	i) 1No. 150A Adj 07-1i TPN MCCB with Shunt Trip as SHNEIDER, ABB or approved equivalent.				
	ii) 1No. Appropriate size Voltmeter plus selector switch.				
	iii) 1No. Appropriate size Ammeter plus selector switch with C.T.s				
	iv) 3No. Phase indicating lights				
	v) 1No. Power factor meter				
	Sub-Total C/F to the Next Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Sub-Total B/F from Previous Page				
	b) <u>Outgoing</u>				
	i) No. 40A TPN MCCB feeder to the consumer units as indicated on the drawings as SHNEIDER,ABB or approved equivalent.				
	ii) 1No. 63A TPN MCCB feeder for the pump as SCHNEIDER,ABB or approved equivalent.				
	iii) 1No. 40A TPN MCCB feeder for future loads as SHNEIDER,ABB or approved equivalent.				
	c) 20A SPN MCb Firemans switch including interwiring with the main incommer MCCB of the medium voltage equipment	1	**No.**		
	d) Carry out comprehensive labeling of all the bus bars. CT chambers, circuit breakers etc. above, indicating the areas served, outgoing cable sizes etc.	1	**Lot**		
	e) Carry out concise load balancing to achieve a maximum imbalance not greater than <u>+</u> 10% between any two phases, measured at the Main LV switchboard	1	**Lot**		
	Sub-Total C/F to the Next Page				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Sub-Total B/F from Previous Page				
C	**COMPREHENSIVE PROTECTIVE MULTIPLE EARTHING**				
i	**Earthing of the subboard in accordance with KP&L company requirements, IET regulations,the government Electrical Installations regulations and other statutory requirements comprising but not limited to the following**				
	a) Establish 450x450x700mm deep earthing chamber, complete with internal plastering, and heavy duty EAFW steel cover clearly marked "EARTH".	1	**No.**		
	b) 25mm X 3mm pure copper tape as Furse	**3**	**Lm.**		
	c) Pure copper earth rod (1500mm x 16mm)	1	**No.**		
	d) Driving head for earth rod	1	**No.**		
	e) Tape to earth rod clamp as Furse	1	**No.**		
	f) 16mm2 single core green PVC insulated copper earth lead	**20**	**Lm.**		
	Sub-Total for LV boards CARRIED TO SUMMARY page for power distribution				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
D	**SUB-MAIN DISTRIBUTION CABLES, DUCTS & MANHOLES** **Supply, install, test and commission the following cables complete with cable glands and lugs where necessary.**				
	a) 95mm sq. 4-core PVC/SWA/PVC Copper Cable from medium votage equipment to LV Sub-boards in each wing complete with appropriate cable lugs.	**80**	**Lm.**		
	b)25mm^2 3Core PVC/PVC Copper cables in cable trench and concealed in HG PVC conduits from LV Sub-boards to Distribution Boards complete with appropriate cable lugs.	**150**	**Lm.**		
	d)10 mm sq. 3 C PVC/PVC copper cable concealed in HG PVC conduits from the Distribution boards to the consumer units	**100**	**Lm.**		
ii	**100mm dia. HG PVC duct in 200mm concrete surround buried 600mm underground for power supply cable from power house to Sub -boards on ground floor**	**100**	**Lm.**		
iii	**Establish 600 x 600 x 750mm deep standard power manholes, complete with internal plastering, and heavy duty recessed lockable steel cover.**	**8**	**No.**		
iv	**Establish 450 x 450 x 700mm deep standard data/telephone manholes, complete with internal plastering, and heavy duty recessed lockable steel cover.**	**4**	**No.**		
V	**70mm diameter HG PVC ducts encased in concrete surround buried in ground for incoming data/telephone supply cables.**	**50**	**Lm.**		
	Fully automatic voltage stabilizer 250KVA, 3 phase indutrial AC automatic voltage stabilizer, with input voltage range 304-456V AC which has the functions of over/under-voltage protection, delay and error protecction.	**1No.**			
vi	**Excavate trenches for ducts and armoured cables above, average depth 1000mm, remove soft earth, lay ducts, cover with "DANGER-HATARI" tiles, back fill soft earth and compact to natural ground level.**	**100**	**Lm.**		
	Sub-Total for cabling CARRIED TO SUMMARY page for power distribution				

LIGHTNING PROTECTION

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Supply, install, test and commission the following:				
A	**AIR TERMINATION**				
i	**Air termination spike comprising the following. 2000mm by 15mm diameter copper rod as Furse P.No. RA240 Complete with: Copper multiple point as Furse P. No. RA 600 and Copper ridge saddle as Metsec.**	6	**Item**		
B	**DOWNWARD CONDUCTOR**				
	Supply and lay along the ridge cap 25mm X 3mm thick bare copper tape as Metsec.	**360**	**M**		
¡	**State Holdfast as Metsec to fix the above tape to the roof ridge.**	**24**	**No.**		
ii	**Copper square tape clamp for making crossing tape joints as Metsec**	**12**	**No.**		
iii	**DC tape clips for fixing the down conductors to the wall as Metsec**	**150**	**No.**		
iv	**Copper Oblong test clamp as Metsec.**	4	**No.**		
v	**Saddles for the above item**	**50**	**No.**		
C	**EARTHING**				
i	**Earth inspection concrete chamber 300mm x 300mm x 300mm with an air tight inspection recessed and lockable cover to approval.**	3	**No.**		
ii	**16 mm nominal diameter by 1500mm threaded copper bond earth rod as Metsec driven to ground.**	6	**No.**		
iii	**Driving stud for the above item as Metsec**	6	**No.**		
iv	**Earth electrode rod - to - downward conductor copper tape clamps as Metsec**	**6**	**No.**		
	Total for Lighting Protection C/F to Power Distribution Price Summary Page				

POWER DISTRIBUTION PRICE SUMMARY PAGE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1	**TOTAL FOR Medium voltage equipment and LV boards**	
2	**TOTAL FOR Cables ,Ducts and Manholes**	
3	**TOTAL FOR Lighting Protection**	
	Total for Power distribution C/F to Grand Price Summary Page	

SOLAR POWER INSTALLATIONS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT KSHS
	Supply, install, testing&commissioning of the following complete as specified				
A	**Solar Panels**				
	360W-24V Mono- Crystalline PV Solar Module as Victron cat No. SPM043602400 or equal and approved equivalent. With **i. DC Combiner** **ii. DC MCB**	**48**	**No.**		
B	**Solar Charge Controller for Item 7.01 Above** **MPPT Charge Controller with display** **Rated charge current:100A** **Nominal PV power, 24V:2900W** **as Victron cat No. MPPT 250/100-Tr or equal and approved equivalent**	**1**	**No.**		
C	**Hybrid Inverter**				
	Frequency Range AC Input:50Hz **Waveform: Pure Sine Wave** **Peak Inverter Efficiency: 96%,** **Nominal AC output Voltage: 415V AC** **Nominal DC Input Voltage:24V** **Frequency: 50 Hz** **Continous Power Rating: 10000VA** **as Victron cat No. 24/8000-200-100/100 Inverter/Chargeror equal and approved equivalent**	**1**	**No.**		
D	**Earthing**				
	Earthing of the whole solar Power installations in accordance to IEE regulations	**1**	**Item**		
	Allow for Wiring of the above installation to include all accessories, appropriate cables, cable lugs,conduits,trunking and cable trays etc	**1**	**Item**		
	Solar Power Sub-total C/F to Collection Page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT KSHS
	Balance B/D from Previous Page				
E	Distribution Board for solar power 4Ways Distribution with 125A TP Isolator as Schneider Electric cat No. PD-A9EDB04F125 or equal and approved equivalent	1	No		
F	The following MCB as Schneider Electric For item 7.08 above a) 20A TP MCB	10	No.		
G	300AH 24V Deep Cycle Lithium Ion phosphate Battery (cycle 3000>) as victron or equal and approved equivalent. i. Isolator switch between chager controller ii. DC MCB	24	No.		
H	Battery Housing Free standing powder coated lockable Board fabricated from sheet metal gauge 12swg initially primed with anti-rust paint and perforated on the backside to fit the number set above units.	1	Item		
I	Solar Panels support structure made from Rust-proof Mild steel to fit the above panels and fast fit onto the roof as directed by the PEE.	1	Item		
J	Allow for any other item required to complete the installation i. Ii.	1	item		
	Solar Power Sub-total C/F to Collection Page				

THE PROPOSED 15K SEATER ATHLETICS/FOOTBALL STADIUM

ELECTRICAL INSTALLATIONS BILL OF QUANTITIES

GRAND SUMMARY PAGE

ITEM	DESCRIPTION	Unit	Qty	RATE (KSHS)	AMOUNT (KSHS)
	PRELIMINARIES	Item	1		
1	SUMMARY FOR ELECTRICAL SERVICES--Stadium	No	1		
2	SUMMARY FOR STRUCTURED CABLING	No	1		
3	SUMMARY FOR GENSET	No	1		
4	SUMMARY FOR Stadium flood lighting	No	1		
5	SUMMARY FOR OUTDOOR SOLAR LIGHTING	No	1		
6	SUMMARY FOR IP CCTV	No	1		
7	SUMMARY FOR LV POWER DISTRIBUTION	No	1		
8	SUMMARY FOR SOLAR POWER BACKUP 30KVa	No	1		
9	CAPITAL CONTRIBUTION TO KENYA POWER	Sum	1		
10	Allow for contigency sum	SUM	1		
	TOTAL FOR ELECTRICAL INSTALLATION SERVICES FOR THE PROPOSED 15K STADIUM				

Amount in Words: Kenya Shillings……

……
……
Official Stamp & Address:……

……
……
Tenderer's Signature:……...Date:……..……...……

Witness' Name:……Witness' Signature:……

Address:……..……

Date:……

SCHEDULE OF LIGHTING FITTINGS	
Item	**Description**
TYPE A:	**1200mm, LED, surface mounted, Waterproof batten Coreline 20,1800lm, 3hour emergency internal battery, 1P65 4000k luminaire as Philips or approved equivalent.**
TYPE B:	**40W 600 X 600 mm 4000K surface mounted LED Panel as PHILLIPS or approved eguivalent.**
TYPE C:	**18 W 1500lm Surface mounted Circular LED downlighter as PHILIPS SmartBright or approved equivalent for washrooms**
TYPE D:	**IP 65 23 W 2000lm Surface mounted Circular LED downlighter as PHILIPS SmartBright or approved equivalent for indoor passages**
TYPE E:	**8W Ceiling Recessed Spot Light Lamp LED Downlight as philps or approved equivalent**
TYPE F:	**Linear batten surface mounted IP56 LED, 65W 220-240v luminaire with clear prismatic polycarbonate diffuser, 3hr emergency battery, 4500lumen as philips or equal and approved equivalent.**
TYPE G	**700mm 30 W, 2,300 lm, 4000 K 30,000 lamp hours LED IP65 fully polycarbonate weather resistant and corrosion proof surface mounted Batten as Philips or approved equivalent**
TYPE H:	**36 W 1200 X 300 mm 4000K surface mounted, 3hr battery backup, LED Panel as PHILLIPS or approved eguivalent.**
TYPE W:	**Rectangular (approx-23cmx13cm) 10W LED outdoor weatherproof metal casing rampwall fixture with 1000lm, IP66,230-240V input voltage, 120degree emting angle, anti-agin temepred glass, IK07,80,000hr and 5000K or approved equivalent.**
TYPE EXIT 1:	**Self-contained both sided EXIT sign with 8 W LED lamp for non-maintained emergency lighting for 3 hour duration as THORN EF X3 or approved equivalent.**
TYPE EXIT 2:	**Self-contained Emergency Exit Sign Ceiling/Wall Mount Single Sided 24m IP65 as THORN Voyager or approved equivalent.**

MECHANICAL INSTALLATION WORKS

SPORTS KENYA

15K ATHLETIC/FOOTBALL STADIUM DESIGN PROPOSAL.

VOLUME 3/3

SPECIFICATION AND BILL OF QUANTIES

FOR

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISIONING OF

PLUMBIND & DRAINAGE, FIRE RETICULATION, TANKS INSTALLATION AND SOCCER IRRIGATION INSTALLATION WORKS

CLIENT

SPORTS KENYA,
STATE DEPARTMENT FOR SPORTS
P.O BOX 49849 - 00100,
NAIROBI.

Prepared By:
KENYA SCHOOL OF TVET
P.o BOX 44600-00100
NAIROBI.

AUGUST, 2024

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PART 1: TENDERING PROCEDURES

TENDER EVALUATION CRITERIA

Note: The tenderer who shall be domestic subcontractor to the Main Contractor upon award of the tender, must comply with the following conditions and instructions failure to which the tender shall be rejected.

After tender opening, the tenders will be evaluated in **2 stages**, namely:

1. Preliminary Evaluation;
2. Technical Evaluation;

STAGE 1: PRELIMINARY EVALUATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These conditions shall include the following:

i) Company Certificate of incorporation/registration;
ii) Current National Construction Authority Registration certificate (NCA 4 and above in Mechanical Engineering Services – Plumbing & Drainage, Fire reticulation, Tanks installation and Soccer irrigation categories);
iii) NCA current annual practicing license,
iv) Valid Tax Compliance Certificate;
v) Dully filled (in ink) Bills of quantities in the format provided, signed and stamped Summary Page

Note:

On compliance with Technical Specifications, bidders shall supply equipment /items which comply with the technical specifications set out in the bid document. In this regard, the bidder will be required to submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items. Such brochure/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;
(iii) Material of manufacture;
(iv) Electrical power ratings; and
(v) Any other necessary requirements so as to comply with the bid technical specifications.

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. Bidders not complying with **any** of the key Technical Schedule specifications shall be **Non-Responsive** while those meeting all the key technical specifications shall be **Responsive (evaluation committee may add more key requirements from the bid technical specifications.**

The tenderer shall also fill in the Technical Schedule as Specified in the tender document for Equipment"s and items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/ Equipment they propose to supply.

The tenderers who do not satisfy any of the above mandatory requirements shall be considered Non-Responsive and their tenders will not be evaluated further.

STAGE 2 TECHNICAL EVALUATION

A) Assessment for eligibility

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

TABLE 1: Assessment for Eligibility

Item	Description	YES/NO
1.	**Compliance with Technical Specifications** *(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)*	
2.	**Qualification and Experience of Key Personnel**	
	Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates) **a) Director of the firm** • Holder of at least a diploma with 10 years" experience in a relevant field	
	b) Project Manager/ Site Agent • Holder of at least a degree with 5 years" experience in a relevant field	
	c) At least 3 No artisans • Holder of at least a certificate with 5 years" experience in relevant Engineering field	
3.	**Experience of the firm in similar services: (*Borehole Drilling and equipping installation*)** a) Provide Three (3No.) projects of similar nature, complexity or magnitude) between the Period 2019 – 2023: **(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)**	
4.	**Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)** The tenderer ***must*** show proof of ownership or leasing of the following equipment: - a) **Relevant Transport (at least 1No.)** • Means of transport b) **Relevant Equipment (at least 3No.)** • Has relevant equipment for work being tendered	
	QUALIFIED YES / NO	

Noncompliance with the Technical Evaluation will render the Tenderer Non responsive and therefore unqualified for further evaluation:

PART II- WORKS REQUIREMENTS

B. GENERAL MECHANICAL SPECIFICATIONS

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 minimize 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 weeks" 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.

2.08.5 Shop drawings

Before manufacture or Fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

2.09 **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.

C: PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

GENERAL

SCOPE OF WORKS

The works to be carried out under this sub-contract comprise Supply, installation, testing and commissioning of the following: -

a) **Plumbing & Drainage, Fire reticulation, Tanks installation and Soccer Irrigation Installation works**

BROCHURES FOR DEVICES

For consideration and qualification tenderers shall, at their own cost, provide colored manufacturer"s brochures detailing technical literature and specifications where applicable

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:

i. **Galvanized Steel Pipework**

Galvanized steel pipe works 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.

ii. **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.

iii. CPVC piping

PVC (polyvinyl chloride) that has been chlorinated via a free radical chlorination reaction. CPVC is produced by adding chlorine to PVC in a water slurry or fluidized bed chlorination process. The chlorination reaction is initiated by ultraviolet light. The chlorinated PVC is compounded with ingredients necessary for the desired properties for further processing. The chlorine added to PVC gives CPVC higher temperature performance and improved fire and corrosion resistance.

Should conform to ASTM D2846 standard and ASTM F441 Standard for chlorinated poly vinyl chloride pipes.

Short copper connection tubes between galvanized pipe work and sanitary fitments 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.

b) **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.

c) **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.

ii. 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-meter centers.
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.

iii. 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.

iv. 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**

v. 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.

vi. 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 Littleshampton, 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 builder"s 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.

vii. 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 meters 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.

viii. <u>Expansion Joints and Anchors</u>

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 **<u>Sanitary Appliances</u>**

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. They shall be as described in the bill of quantities.

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.

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 galvanized steel wire guard.
Access for rodding and testing shall be provided at the foot of each stack.

c) <u>Sanitary Appliances</u>

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 ten hours 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.

ix. **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:

- Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- 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 sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization 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.

D: PARTICULAR SPECIFICATION FOR PORTABLE FIRE EXTINGUISHER BOOSTED HOSE REEL SYSTEM

4.1 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.

4.2 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.

4.3 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.

4.4 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 markings

4.5 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 Kilogram.
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.

4.6 AIR FOAM FIRE EXTINGUISHER

These shall be of 9 Litres capacity complete with refills cartridges and wall fixing brackets and complying with B.S. 5423 with the following specifications: - Cylinder: to B.S. 1449

Necking: to be 76mm outside diameter steel EN 3A $2^3/_4$ X 8TPI female thread**.**
Head cap: to be plastic moulding acetyl resin.
CO_2 Cylinder: to be 75gm P.V.C coated.
Internal Finish: to be polythene lining on phosphate coating.
External finish: to be phosphated - One coat primer paint and one coat stove enamel B.S. 381 C.

4.7 FIRE BLANKET

The fire blanket shall be made from cloth woven with pre-asbestos yarn or any other fire

proof material and to measure 1800 x 1210 mm and shall be fitted with special tapes folded so as to offer instantaneous single action to release blanket from storing jacket.

4.8 BOOSTED HOSE REEL SYSTEM

4.8.1 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.

4.8.2 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 5M3/hr 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.

4.8.3 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.

4.8.4 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 or 45 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-galvanized 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.

4.8.5 Pipe Work

The pipe work for the hose reel installation shall be galvanized 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.

4.8.6 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.

4.8.7 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.

4.8.8 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

4.8.9 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.

4.8.10 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.

4.8.11 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.

4.8.12 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.

4.8.13 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.

4.8.14.1 Signage-Fire Instruction /Fire Exit

4.8.14.2 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 firefighting 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.

4.8.14.3 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.

4.8.14.4 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.

1.1.6 Pipework above Ground

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 building.
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 a position as to be difficult to reach from a short step ladder, extension spindles wit floor or wall pedestals shall be provided.
Screwed piping shall be installed with a sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations I=of the pipework to be carried out without the need to cut the pipe.
Full allowance shall be mad for the expansion and contraction of pipework, pre cautions being made to ensure that any forces produced by pipe movements are not transmitted to valves, equipment or plant.
All tubing exposed on faces of walls shall, unless otherwise specified, be fixed at least 25mm clear of adjacent surfaces with approved holder bats built into the walls, cut and pinned to walls in cement mortar. Where fixed to woodwork, suitable clips shall be used.
All tubings specified as chased into walls shall have the wall face neatly cut and chased, the tubing wedges and fixed and plastered over.
All tubing specified as fixed to ceilings, roofs of roof structures shall be fixed with approved mild steel hangers cut and pinned to ceilings, roofs or roof strictures.
Where three or more tubes are fixed to the ceilings, roofs or roof structures close to each other, they shall be fixed in positions, which leave the lower surfaces at the same horizontal level, unless otherwise specified. Tubes fixed to steel work shall be fixed with clips and tap screws.
Tubes shall be fixed to true lines parallel to adjacent lines of the building unless otherwise specified. Where insulated, tubing shall be fixed with the insulation at least 25mm clear of the adjacent surfaces.
Pipe runs shall be secured by pipe clips connected to pipe hangers, wall brackets or trapeze type supports. „U" bolts shall not be used as a substitute for the pipe clips without prior approval of the Engineer. An approximate guide to the maximum permissible supports spacing in meters for the steel and copper pipe is given in the following table for horizontal runs.

Size Nominal Bores	Maximum support Spacing
15mm	2.0m
20mm	2.5m
25mm	2.5m
32mm	3.0m
40mm	3.0m
50mm	3.0m
65mm	3.5m
80mm	3.5m
100mm	4.0m

Each support shall take its due proportion of the weight of the pipe and shall allow free movement for expansion and contraction. The support spacing for vertical runs shall not exceed one and a half times the distances given for the horizontal runs.
Sleeves shall provide where pipes pass through walls and solid floors to allow movement of the pipes without damage to the structure. The overall length of the sleeve shall be such that it projects at least 2mm beyond the finished thickness of the wall or partition.
Sleeves passing through the structure shall be of mild steel. Elsewhere they shall be of PVC. The sleeves shall have 5-15mm clearance all-round the pipe, or for insulated pipework, all round the insulation. The sleeves shall be packed with slag wool or similar.
Unless anything else is stated in the specification, the tenderer must include in his tender for all protective and finish painting of the works including colour coding of special requirements, if any, are specified in the text of the particular specification. The painting shall be carried out by skilled painters.

1.1.6.1 Galvanised Mild steel Tubing

Galvanized mild steel tubing shall be in accordance with B.S 1387 with screwed and socketed joints.
Fittings for the same shall be galvanized malleable iron to B.S 143 & 1256 threads to BS 21.
Joints shall be made with fine hemp and an approved jointing compound or with Teflon sealing tape. Compound containing red lead must be used, unless otherwise specified.
All changes of direction shall be obtained by us e of proper fittings. Formed bends shall not be accepted.
Long screw connectors and flat -faced unions shall not be used, unless otherwise specified.
Where chased into walls or cast in concrete, galvanized mild steel tubing carrying hot water shall be wrapped with hair felt secured by copper wire.
The fixing of galvanized mild steel tubing shall be done using:

a) Malleable iron “school board” pattern brackets for building in or screwing to structure or
b) Malleable pipe rings, with either back plate, plugs or girder clips or
c) Purpose made straps to Engineer‟s Approval.

1.1.6.2 Copper Tubing

Copper tubing shall be light gauge conforming to B.S. 2871 and the fittings shall be capillary or compression fittings to B.S. 864 of approved manufacture.
Joints on tubing up to and including 50 mm diameter, shall be compression or capillary joints or direct joints using zinc-free self-fluxing silver brazing alloys. Joints on tubing above 50 mm diameter shall be welded or blazed joints.

Copper tubing shall be jointed to steel cisterns by the use of copper-alloy connector having a shoulder to bear on the outside of the cistern and secured by a back nut inside. Washers shall be used both inside the cistern.
Where chased into walls or cast in concrete, copper tubing shall be wrapped with corrugated cardboard or hair felt secured by copper wire.

The fixing of copper tubing shall be done by using: -

a) Copper-alloy holderbats for building in, or screwing to structure. Or
b) Strap clips of copper, copper-alloy or other suitable material. Or
c) Gunmetal holderbats similar to "YORKSHIRE",

Iron or steel supports shall not be used for copper tubing.
All bends and sets shall be formed without diminishing the internal diameter in any part or causing fracture or weakness of the tube walls.

1.1.6.3 Valves, Cocks, Taps Etc.

Gate Valves

All gate valves up to and including 65mm nominal bore and above, other than those required for fitting to buried water mains shall be of bronze construction in accordance with the requirements of B.S. 5154. The pressure classification of all gate valves shall depend upon the pressure conditions pertaining to the site of the works.

The pressure classification of all gate valves shall depend upon the pressure conditions pertaining to the Site of Works.

Globe Valves

All globe valves up to and including 65 mm nominal bore shall be of bronze construction in accordance with B.S. 2060.

All globe valve 80 mm nominal bore and above shall be of cast iron construction in accordance with the requirements of B.S. 3961.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the Site of Works

Check or Non-Return Valves

All check or non-return valves up to and including 65 mm nominal bore shall be of the swing check type of bronze construction in accordance with B.S. 1953.
All check or non-return valves 80 mm nominal bore and above shall be of the swing check type of cast iron construction in accordance with the requirements of B.S. 4090.

The pressure classification of all check or non-return valves shall depend on the pressure conditions pertaining to the Site of work

Ball Float Valves

All ball valves for use in connection with hot and cold-water services shall be of the Portsmouth type in accordance with the requirements of B.S. 1212, constructed from bronze or other corrosion resistant materials. These valves fall into three pressure classification as follows: -

(i) Low pressure – 3.588 bar maximum

(ii) Medium pressure – 7. 725 bars maximum.

(iii) High pressure – 12. 620 bars maximum.

The pressure Classification required for each ball valve will be designated in the description of its associated equipment.

1.1.7 Water Storage Tanks

1.1.7.1 Cold Water Storage Tanks

Where specified as galvanized mild steel, water storage tanks shall comply with B.S. 417. Galvanizing shall take place after manufacture. The engineer shall witness galvanising at the factory

Pressed steel sectional water storage tanks shall comply with B.S. 1564, and shall be similar in manufacture to "BRAITH-WAITE".

Water storage tanks shall be mosquito proofed by means of well-fitting bolted cover bedded on a thick gasket of felt or bitumen.

Overflow pipes from tanks shall discharge into air or floor gullies where nearby positioned, with splay cut ends mosquito proofed by means of wire gauze tightly bound on with stout galvanized wire or soldered on.

1.1.7.2 Thermal Storage Water Heaters

The pressure and low-pressure types domestic electric water heaters shall comply with B. S. 843; high pressure types shall be of a Standard not less than the appropriate B.S.

Domestic heaters shall, if nothing else is specified, be supplied with 50 mm thick fibre glass lagging.

Electric thermostatically controlled immersion heaters shall comply with B.S. 3456: Section 2:21 and C.P. 324.202.

Purpose made storage water heaters of the specified size shall comply with B.S.853 and shall be to the specified working and test pressure. The heaters shall be provided with all necessary bosses, coils, etc. and shall be hot dip galvanized after manufacture.

1.1.7.3 Pressure Vessels

Pressure vessels shall be manufactured in accordance with B.S. 1500 A for the specified pressure and be fitted with all necessary openings and connections.

1.1.8 Protection of metal surfaces

Machinery, equipment, etc. shall be tropicalized and with protective treatment fully suitable for application and in the prevailing climatic conditions.

Full details of tropicalization and comprehensive paint treatments, to a dry film thickness of nowhere less than 200 microns, shall be submitted for the approval of the Consultant.

All metalwork shall be protected by either: -

(a) Hot dip galvanizing; where painted treatment shall be 50 microns epoxy primer or 5-10 microns wash-primer; 30 microns modified alkyd undercoat and 30 microns enamel finish,

Or

(b) Metallic lead epoxy primer, epoxy micaceous iron oxide, micaceous iron oxide modified alkyd undercoat and enamel finish, layers minimum 30 microns each.

Surfaces of metalwork shall be thoroughly brushed down with wire brushes to remove all scale, rust, etc., and structural steelwork shall be grit blasted before protective treatment.

All paint shall be applied fully in accordance with the manufacturer"s instructions.
All water tanks inclusive covers, machinery casings, claddings and whosesoever specified shall be protected by hot dip galvanizing.

Hot dip galvanized coatings shall be executed in accordance with British Standard BS 729.
The values for coating weight shall be as follows to B.S 729: -

5 mm thick and over	- 610 to 630 g/m (87 –90 um)
Under 5 mm but not less than 2 mm	- 460 to 490 g/m (66 – 70 um)
Under 2 mm but not less than 1 mm	- 335 to 350 g/m (48 – 50 um)
Grey and malleable iron castings	- 610 to 630 g/m (87 – 90 um)
Threaded work and other articles which are centrifuged	- 305 to 315 g/m (44 –45 um)

For conversion to coating thickness unit weight of zinc shall be assumed 7 g/cm^3. The values stated shall be taken as minimum average values for a set of samples. Individual minimum values shall be introduced as the above mentioned minus 10%.
When galvanized coats are damaged, e.g. threaded pipe connections made on site, the exposed parts shall be repaired with same paints as for additional coating. Colour grey.
Galvanised steel plates shall have a minimum of 25 years of warranty against rust, corrosion or any other damage due to poor galavanization.

1.1.9 Instrumentation

Instrumentation shall be provided as indicated on the drawings and specified in the specifications.
Pressure gauges shall be installed on the pipe at both sides of pumps.
Pressure gauges shall be fitted with shutoff cock, read in the pressure range of system, minim 12 cm. (4 $^1/_2$ inch) dial, adjustable angle face, white face with black figures and pointer.

Thermometers shall be installed with separable sockets. Bronze sockets shall be used in nonferrous systems and stainless steel in ferrous systems.
Thermometers shall be mercury actuated, 12 cm (4 $^1/_2$ inch) dial, adjustable angle face with black figures and pointer.
Where recording thermometers are required, they shall have chart 25 cm. (10 inches) in diameter, shall operate with one pen on 24-hour charts, with a range 10^0C to 105^0C (50^0F to 220^0F).

E: PARTICULAR SPECIFICATION FOR DRY RISER INSTALLATION.

5.0 The Dry Riser Installation

5.1 Definition

Dry riser installation is a system where a pipe is installed vertically through a building with and inlet breeching provided at a street level through which the fire brigade can pump water.

5.2 Installation

The dry riser is installed with Fire Brigade Breeching inlet installed at street level in front of the building at a position where fire brigade can access and pump water into the building. Landing valves are then installed on each floor above the ground level to which the fire brigade can attach firefighting hoses.

5.3 Landing Valves

The Hydrant outlets shall comply with the requirements of C.P 5306 Part 1:1976 and B.S 5041 Part 1. The hydrant Riser outlets shall be 2No minimum per floor including the roof and shall be mounted with their centre line between 910mm and 1060mm above finished floor level positioned at the entry lobby on each floor.

5.4 Fire Brigade Breeching Inlets

One of the Brigade Breeching inlets shall consist of four (4No.) 64mm internal diameter instantaneous male coupling for connection to the fire brigade pumps and other two shall consist of two (2No.) 64mm internal diameter instantaneous male coupling.

The breeching inlet shall incorporate a 100mm diameter flanged connection to the 100mm dry riser mains.
The breeching inlet shall be located 1000mm to the centre line of the box above ground level.
The breeching inlet shall be enclosed in a galvanized mild steel cabinet of suitable dimensions to contain all visible pipe work. A 7.5mm thick wired glass front shall be provided with 50mm high, red lettering, **DRY RISER BREECHING CONNECTOR.**
The reminder of the box is to be finished in fire red enamel paint.

5.5 Pipework

The pipe work fittings shall be wrought steel pipe fittings welded or seamless fittings conforming to B.S 1740 Part 1971 or malleable iron fittings to B.S 193.
All changes in direction will be standard bends or long radius fittings. **No elbows will be permitted.**

5.6 Flanges

The flanges shall comply with B.S 4504:1969. All flanges shall comply with a nominal Pressure Rating of 16 bars and shall be of either grey cast iron or steel.

5.7 Gaskets

The gaskets for use with flanges to B.S 4504: 1969 shall comply with B.S 4865 Part 1: 1972 for pressure up to 64 bars.

5.8 Air Relief Valves

The dry riser shall terminate 1M above the roof landing valve with an air relief valve. The valve construction shall be of iron Grade E conforming to B.S 1452. Float Guide and Seat Ring shall be of A.B.S plastic with seal ring of moulded rubber, Maximum working pressure of the valve is to be 16 bar.

5.9 Non-Return Valves

The non-return valves up to and including 80mm diameter shall conform to B.S 5153:1974 with flanges to B.S 4504 PN 16. The valves shall be of cast iron construction with gunmetal seat and disc with spring of phosphor bronze.

Non return valves exceeding 80mm diameter and up to 300mm diameter shall be conform to B.S 5153:1974 with flanges to B.S 4504 PN 16. The valve shall be is Cast Iron Construction with Gunmetal seat to B.S 1400.

5.10 Gate Valves

The gate valves up to and including 80mm shall be non-rising stem and wedge disc to B.S. 1952:1964 (B.S 5154:1974) with screwed threads to B.S.21(KS ISO 7 – 1) taper thread. The valves shall be of high-grade bronze construction.

Gate valves exceeding 80mm and up to 300mm shall be to B.S 5163 with flanges to B.S 4504 PN 16. The valve is to be double flanged cast iron wedge gate valve for water works purposes with cast iron body to B.S 1452 GRADE 14 with rubber covered cast iron gate. The stem is to be of Forged Stainless Steel to B.S 970 with cast iron hand wheel.

5.11 Sleeves

Where Pipework pass through walls or floors or ceiling a sleeve shall be provided one diameter larger than the diameter of the pipe the space between to be the packed with mineral wool, to the Engineers approval.

5.12 Floor and Ceiling Plates

Where pipes pass through floors, walls and ceilings, floor, wall and ceilings plates shall be secured around the pipe. The plated shall be of stainless-steel construction and will serve no other purpose than to present a neat finish to the exposed installation

5.13 Earthing

The dry riser shall be electrically earthed by a direct earth connection. The installation of the earthing to be carried out by the electrical Sub-Contractor

5.14 Finish Painting

Upon completion, testing and commissioning of the dry rise installation the pipe work shall be primed and finish painted with 2No. Coats of paint by the Sub-Contractor to the Engineer"s requirements.

5.15 Testing and Commissioning

The installation is to be tested to one and half times the working pressure of the installation, all to the approval of the Engineer. The pressure shall be maintained for about 1 hour ensuring that there is no change in pressure is observed

5.16 Canvas Hose

The canvas hose shall be 65mm diameter 30m long designed for a bursting pressure of 34 bars. The canvas hose shall have attached instantaneous hose coupling, branch pipes and nozzle to B.S 336: 1965.

5.17 Hose Cradle

The hose cradle shall be a high-quality fitting designed for use in public buildings. The cradle **shall be made in Aluminum** throughout and shall be supplied with a wall bracket and the finish shall be polished or chrome plated

F: <u>PARTICULAR SPECIFICATION FOR FIRE HYDRANT.</u>

6.1 Fire Hydrant Details

6.1.1 Definition

The fire hydrant is a system which is installed along the water mains to use as a means of providing water to the fire brigades through the connection of the hose from a stand pipe.

6.1.2 Installation

The fire hydrants are installed along the water mains with the first hydrant at a location which is not more than 60 m from the entry of any building and they should not be more than 120 m apart.

6.1.3 Hydrant body

The body of the hydrant shall be made of grey cast iron complying with the requirements of BS 1452 having a tensile strength not less than that given for grade 14.

6.1.4 Hydrant Valve

The valve shall be faced with suitable resilient material. The threaded part of the valve, which engages with the spindle, shall be of bronze.

Body seating for the valves shall be of copper alloy complying with the requirements of BS 1400 (KS 06 – 744 – 1:1991) or high tensile brass complying with the requirements of BS 2872 or BS 2874.

Turning the spindle cap in a clockwise direction when viewed from above shall close valves and the direction of opening shall be permanently marked on the gland.

6.1.5 Spindle & Spindle Cap

The spindle note shall be either of the same material as the spindle, or of copper alloy complying with the requirements of BS 1400 (KS 06 – 744 – 1:1991). It shall have a squared top formed to receive either a cast iron spindle cap.

The spindle shall be made of copper alloy complying with the requirements of BS 2874 (KS 06 – 744 – 1:1991), and it shall have a threaded machined of trapezoidal form. The spindle cap shall be of a cast iron secured to the spindle by on M12 hexagon socket set screw conforming to BS 4168.

6.1.6 Hydrant Outlet

The outlet flange of the hydrant shall have above nominal diameter 65mm, and shall be fitted with a screwed outlet – Both flanges shall be 50 mm conforming to BS 4504: Part 1: 1969

The screwed outlet shall be provided with a cap of cast iron or other suitable material. The cap shall cover the outlet thread completely and shall be attached to the hydrant by a chain The distance between the axis of the outlet and the nearest point on the spindle fitting shall be not less than 100 mm.

The screwed outlet shall be made of Copper alloy to BS 1400 (KS 06 – 744 – 1:1991), or Copper alloy to BS 2872, or Suitable Spheroidal graphite iron to BS 2789 protected against corrosion accordance with CP 2008.

6.1.7 Drain Boss

Each shall be provided with a suitable drain boss on the outlet side. This shall be located at the lowest practical point which will permit the filling of self-operating a drilled drip plug.

6.1.8 Jointing

The hydrants shall have machined joint faces throughout and the fitting of adjoining parts shall be such as to make sound joints, corresponding parts of hydrants of the same design and manufacture shall be interchangeable.

6.1.9 Hydrant coating

The hydrant shall be coated in accordance to BS. 4164.

6.1.10 Surface Box

The clear opening of hydrant surface boxes at ground level shall not be less than 250mm x 380mm.

The depth of frame shall normally be:

a) For boxes located on footpaths: 100mm
b) For boxes located in roads: 125mm

6.1.11 Marking

Surface box covers shall be clearly marked by having the words **„FIRE HYDRANT"** in letter not less than 30mm high, or the initials **„FH"** in letters not less than 75mm high cost into the cover.

6.1.12 Surface Box Covers & Frames

The surface box frames and covers shall be graded in accordance with BS 497:1967 and shall meet the loading test requirement also given in BS 497

6.2 Stand Pipes

One end of these shall have internal threads to couple with the 80mm diameter external threads of the screw down type or above ground fire Hydrant (BS 750 type 2 hydrants) outlet. It shall have 65mm diameter internal threads to couple with the interconnect or hose of the pump set

6.3 Hose Pipe

Each cotton synthetic fibre rubberized fire hosepipe to be at least 30 metres long with 65mm diameter female instantaneous type connector complete with nozzle.

6.4 Testing

The hydrants shall be deemed to have undergone the necessary hydrostatic and flow test at time of manufacture. Necessary test certificates from the manufacturer shall be needed. The test, to conform to BS 750: 1977:

G: BILLS OF QUANTITIES

STATEMENT OF COMPLIANCE

a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.

b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ……..……. *for and on behalf of the Tenderer*

Date: ……

Official Rubber Stamp: ……..……

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. 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.

4.4. 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.

4.5. 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.

4.6. 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.

4.7. 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.

4.9 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-Clause13.5 and Clause 13.6 of the General Conditions of contract.

4.10 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.

4.11 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.

4. 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 a 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 done before such work is cover-up.

5.5 All items that have not been measured and therefore not subject to tenders 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 "Provisional Sum for Contingencies" and "Provisional Sum for Fluctuations".

x. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2nd edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*

2. The Site is situated in **KENYA.** It is approximately **……...** Access to the site shall be through**……..…** This 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 progress on 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 are 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, water pipes 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. They 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 at own 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.

24. 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.

25. 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 his rates.

26. The Contractor shall provide temporary sheds, offices mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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 tore move 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.

35. 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.

36. The Contractors 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.

37. The Contractors 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 there from in the build-up of rates.

38. 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.

39. 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.

40. 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 VAT 1.19 as instructed elsewhere.

41. 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: 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 Main Contractor, all payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site				
4	Site location: The site of the Contract Works is **.** 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 to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
5	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. 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.				
6	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				
8	Variation: No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager				
9	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.)				
	Sub-Total for Preliminaries c/f to Page 64				

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 to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
14	Provision of services by the Main contractor: In accordance with Clause 1.08 of this Specification the Contractor shall make the following facilities available to the Sub-contractor: 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. b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized. 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. 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. ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.				
15	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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
17	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.				
18	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.				
20	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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
21	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.				
22	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 WorksIf 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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
24	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. 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.				
25	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.				
26	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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications				
27	Testing and Inspection – manufactured plant: The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials.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. 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.				
28	Testing and Inspection – Installation: Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.				
29	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. 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				
30	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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
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				
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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager.				
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	**200,000**	
38	Allow for profit and Attendance for the above				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
41	Any other preliminaries;				
	Subtotal above				
	Subtotal brought forward from page …..... 54				
	Subtotal brought forward from page …..... 55				
	Subtotal brought forward from page …..... 56				
	Subtotal brought forward from page …..... 57				
	Subtotal brought forward from page …..... 58				
	Subtotal brought forward from page …..... 59				
	Subtotal brought forward from page …..... 60				
	Subtotal brought forward from page …..... 61				
	Subtotal brought forward from page …..... 62				
	Subtotal brought forward from page …..... 63				
TOTAL FOR BILL NO. 1 - PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY PAGE ….... 115					

Bill No 2 :Sanitary Fittings					
	Ground Floor Left Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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.				
	(i) All sanitary fittings shall be in approved colour.				
	(ii) The Model and Ref No. indicated are a guide to the type and quality of fittings.				
	(iii) Equivalent models **MUST** be Approved				
	(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **SAWA (Horizontal outlet) water** closet or equal and approved.	90	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	90	No		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Duravit D-Code or equal and approved.	58	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	58	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	90	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate(Kshs)	Amount (Kshs)
A	**Shower Mixer** Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower mixer as of tapis or approved equivalent for hot and cold water to a 100mm diameter swivel/ adjustable shower rose as **COBRA** or approved equivalent, shower arm ,shower tap and other necessary fittings and accessories. All to be as **COBRA** or equal and approved.	8	No.		
B	**Towel Rail** Chrome plated towel rail 600mm long with the rail and brackets as one piece. To be as GROHE "Atrio Accessories Tier:G5 Prestige" model 40 309" or equal and approved.	8	No.		
C	**Soap Dish** Chrome plated single soap dish as DALI MT51 or approved equivalent.	8	No.		
D	**Bathroom Tap** 15mm diameter chrome plated back inlet bib tap **COBRA**	4	No		
E	**Toilet Brush and Holder** Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	90	No.		
F	**Mirror** 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	58	No.		
G	**Soap Dispenser** Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	30	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Stainless Steel Urinal Slap** Supply and install 1500 x 1050mm long 16 gauge and 304 grade Stainless steel urinal trough complete with 9 litres exposed cistern, downpipe, 500mm domed waste, flushpipe and spergepipe, fixing brackets and fixing kit, satin polish finish. The slab should be fabricated to suite the layout of the layout of the position to be installed. the urinal should be fabricated in such away that it is continuous but with 90 degree turn and complete with integral wall fixing ends.	2	No.		
B	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	10	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	2	No.		
B	**Disabled Persons Water Closet and Wash Hand Basin Facility** Wheel chair accessible W.C facility Comprising of the following:- **i**) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow.The bowl shall be of size 375x560x420mm high.The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402 .The unit shall be complete with valveless cistern fittings including syphon, 1 /2" side inlet ballvalve, 3 /4" side overflow, plastics flushbend, inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. **ii)** Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. **iii)** Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.	4	Set		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F-12 ……	
2	Total carried forward from page F-13 ……	
3	Total carried forward from page F-14 ……	
4	Total carried forward from page F-15 ……	
	Total for ground floor left wing Carried Forward	

	Ground Floor Right Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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.				
	(i) All sanitary fittings shall be in approved colour.				
	(ii) The Model and Ref No. indicated are a guide to the type and quality of fittings.				
	(iii) Equivalent models **MUST** be Approved				
	(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **SAWA (Horizontal outlet) water** closet or equal and approved.	70	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	70	No		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as **SAWA** or equal and approved.	43	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	43	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	70	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Shower Mixer** Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower mixer as of tapis or approved equivalent for hot and cold water to a 100mm diameter swivel/ adjustable shower rose as **COBRA** or approved equivalent, shower arm ,shower tap and other necessary fittings and accessories. All to be as **COBRA** or equal and approved.	8	No.		
B	**Towel Rail** Chrome plated towel rail 600mm long with the rail and brackets as one piece. To be as GROHE "Atrio Accessories Tier:G5 Prestige" model 40 309" or equal and approved.	8	No.		
C	**Soap Dish** Chrome plated single soap dish as DALI MT51 or approved equivalent.	8	No.		
D	**Bathroom Tap** 15mm diameter chrome plated back inlet bib tap **COBRA**	4	No		
E	**Toilet Brush and Holder** Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	70	No.		
F	**Mirror** 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	70	No.		
G	**Soap Dispenser** Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	15	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	15	No.		
B	**Stainless Steel Urinal Slap** Supply and install 1500 x 1050mm long 16 gauge and 304 grade Stainless steel urinal trough complete with 9 litres exposed cistern, downpipe, 500mm domed waste, flushpipe and spergepipe, fixing brackets and fixing kit, satin polish finish. The slab should be fabricated to suite the layout of the layout of the position to be installed. the urinal should be fabricated in such away that it is continuous but with 90 degree turn and complete with integral wall fixing ends.	1	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate(Kshs)	Amount (Kshs)
A	**Kitchen Sink (DBDD)** Double bowl, double drainer stainless steel kitchen sink of size 1800 x 500mm as manufactured by ASL 159 or equal and approved. The bowl size to be 370 x 340 x 200mm deep complete with chrome plated 40mm waste fittings, plugs, chain stays, overflow, 1No. 15mm diameter chrome plated sink mixer with over-arm swivel spout as Cobra model 166/04 with carina handles, chrome plated bottle trap with 75mm deep seal and chain waste fitting.	1	No.		
B	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	1	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate(Kshs)	Amount (Kshs)
A	**Disabled Persons Water Closet and Wash Hand Basin Facility** Wheel chair accessible W.C facility Comprising of the following:- **i**) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow.The bowl shall be of size 375x560x420mm high.The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402 .The unit shall be complete with valveless cistern fittings including syphon, 1 /2" side inlet ballvalve, 3 /4" side overflow, plastics flushbend, inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. **ii)** Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. **iii)** Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.	8	Set		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F-18 ……	
2	Total carried forward from page F-19 ……	
3	Total carried forward from page F-20 ……	
4	Total carried forward from page F-21 ……	
5	Total carried forward from page F-22 ……	
	Total for ground floor right wing Carried Forward	

First Floor Left Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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. (i) All sanitary fittings shall be in approved colour. (ii) The Model and Ref No. indicated are a guide to the type and quality of fittings. (iii) Equivalent models **MUST** be Approved **(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF**				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **SAWA D-Code (Horizontal outlet) water** closet or equal and approved.	9	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	9	No		
	Close Coupled Water Closet Suite . VIP PAVILION				
C	Close coupled Water Closet suite comprising:- - floor mounted white ceramic water closet pan - Top flush, dual flush, white ceramic cistern c/w with fushing mechanism, gaskets, anchorages and interconnections - soft closing detachable sturdy white seat and seat cover with stainless steel hinge - fixings, caps, gaskets, outlets etc. WC suite to be as **'Duravit, Durastyle'** or approved equivalent	12	No.		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Duravit D-Code or equal and approved.	19	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	19	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Toilet Roll Holder				
A	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	21	No.		
	Toilet Brush and Holder				
B	Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	19	No.		
	Mirror				
C	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	19	No.		
	Soap Dispenser				
D	Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	10	No.		
	Hand Driers				
E	Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	4	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Dhobi Sink** Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting & plug.	1	No.		
C	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	1	No.		
A	**Disabled Persons Water Closet and Wash Hand Basin Facility** Wheel chair accessible W.C facility Comprising of the following:- **i**) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow.The bowl shall be of size 375x560x420mm high.The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402 .The unit shall be complete with valveless cistern fittings including syphon, 1 /2" side inlet ballvalve, 3 /4" side overflow, plastics flushbend, inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook.	4	Set		
	ii) Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts.				
	iii) Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.				
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F'-23 ……	
2	Total carried forward from page F-24 ……	
3	Total carried forward from page F-25 ……	
	Total for first floor left wing Carried Forward	

First Floor Right Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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.				
	(i) All sanitary fittings shall be in approved colour.				
	(ii) The Model and Ref No. indicated are a guide to the type and quality of fittings.				
	(iii) Equivalent models **MUST** be Approved				
	(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **Tyford (Horizontal outlet) water** closet or equal and approved.	12	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	12	No		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Duravit D-Code or equal and approved.	14	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	14	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	12	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Toilet Brush and Holder				
E	Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	12	No.		
	Mirror				
F	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	12	No.		
	Soap Dispenser				
G	Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	6	No.		
	Hand Driers				
A	Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	2	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
C	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	1	No.		
B	**Urinal Bowl** White ceramic wall hung urinal bowl consisting of: - urinal bowl with top inlet complete with mounting braces and stainless steel fasteners - spreader nozzle complete with concealed spreader pipes all in stainless steel - white plastic drain grating, 40mm drain siphon, pipe connetction and wall flange. As '**Tapis**' or approved equivalent.	6	No		
C	**Press Button Urinal Flush Valve** Press Button urinal flush Valve comprising: - Top inlet chrome 11/4" urinal flush valve complete with chrome pipe to urinal - chrome plated press action actuator complete with chrome pipe. As '**Khengar**' or approved equivalent.	6	No		
D	**<u>Urinal Bowl Divisions</u>** White ceramic urinal division separating the above described urinal bowls fixed firmly on the wall with stainless steel fasteners. As '**Tapis**' or approved equivalent.	3	No		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F'-27 ……	
3	Total carried forward from page F-28 ……	
5	Total carried forward from page F-29 ……	
	Total for first floor left wing Carried Forward	

	Second Floor Left Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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.				
	(i) All sanitary fittings shall be in approved colour.				
	(ii) The Model and Ref No. indicated are a guide to the type and quality of fittings.				
	(iii) Equivalent models **MUST** be Approved				
	(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **Tywford D-Code (Horizontal outlet) water** closet or equal and approved.	15	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	15	No		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Duravit D-Code or equal and approved.	12	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	12	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	15	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Toilet Brush and Holder				
E	Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	15	No.		
	Mirror				
F	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	15	No.		
	Soap Dispenser				
G	Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	10	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	2	No.		
B	**Stainless Steel Urinal Slap** Supply and install 1500 x 1050mm long 16 gauge and 304 grade Stainless steel urinal trough complete with 9 litres exposed cistern, downpipe, 500mm domed waste, flushpipe and spergepipe, fixing brackets and fixing kit, satin polish finish. The slab should be fabricated to suite the layout of the layout of the position to be installed. the urinal should be fabricated in such away that it is continuous but with 90 degree turn and complete with integral wall fixing ends.	2	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
C	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	1	No.		
A	**Disabled Persons Water Closet and Wash Hand Basin Facility** Wheel chair accessible W.C facility Comprising of the following:- **i**) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow.The bowl shall be of size 375x560x420mm high.The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402 .The unit shall be complete with valveless cistern fittings including syphon, 1 /2" side inlet ballvalve, 3 /4" side overflow, plastics flushbend, inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. **ii)** Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. **iii)** Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.	4	Set		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F'-31 ……	
2	Total carried forward from page F-32 ……	
3	Total carried forward from page F-33 ……	
4	Total carried forward from page F-34 ……	
	Total for second floor left wing Carried Forward	

	Third Floor Left Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES				
	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.				
	(i) All sanitary fittings shall be in approved colour.				
	(ii) The Model and Ref No. indicated are a guide to the type and quality of fittings.				
	(iii) Equivalent models **MUST** be Approved				
	(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF				
	Water Closet (WC) Pan				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **SAWA D-Code (Horizontal outlet) water** closet or equal and approved.	15	No.		
	Water closet Flush Valves				
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	15	No		
	Wash hand basin (WHB)-Pedestal				
C	Wash hand basin size 650 x 500mm with one tap hole, 32mm diameter chrome plated waste, pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. To be as Duravit D-Code or equal and approved.	12	No.		
	Wash hand basin Tap				
D	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	12	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as **Twyfords** or equal and approved.	15	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Shower Mixer				
A	Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower mixer as of tapis or approved equivalent for hot and cold water to a 100mm diameter swivel/ adjustable shower rose as **COBRA** or approved equivalent, shower arm ,shower tap and other necessary fittings and accessories. All to be as **COBRA** or equal and approved.	1	No.		
	Towel Rail				
B	Chrome plated towel rail 600mm long with the rail and brackets as one piece. To be as GROHE "Atrio Accessories Tier:G5 Prestige" model 40 309" or equal and approved.	1	No.		
	Soap Dish				
C	Chrome plated single soap dish as DALI MT51 or approved equivalent.	1	No.		
	Bathroom Tap				
D	15mm diameter chrome plated back inlet bib tap **COBRA**	1	No		
	Toilet Brush and Holder				
E	Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	15	No.		
	Mirror				
F	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	12	No.		
	Soap Dispenser				
G	Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Mediclinic or approved equivalent.	4	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Stainless Steel Urinal Slap** Supply and install 1500 x 1050mm long 16 gauge and 304 grade Stainless steel urinal trough complete with 9 litres exposed cistern, downpipe, 500mm domed waste, flushpipe and spergepipe, fixing brackets and fixing kit, satin polish finish. The slab should be fabricated to suite the layout of the layout of the position to be installed. the urinal should be fabricated in such away that it is continuous but with 90 degree turn and complete with integral wall fixing ends.	2	No.		
B	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as **MEDICLINIC** or approved equivalent.	2	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Dhobi Sink** Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting & plug.	1	No.		
B	**Kitchen Sink (DBDD)** Double bowl, double drainer stainless steel kitchen sink of size 1800 x 500mm as manufactured by ASL 159 or equal and approved. The bowl size to be 370 x 340 x 200mm deep complete with chrome plated 40mm waste fittings, plugs, chain stays, overflow, 1No. 15mm diameter chrome plated sink mixer with over-arm swivel spout as Cobra model 166/04 with carina handles, chrome plated bottle trap with 75mm deep seal and chain waste fitting.	1	No.		
C	**Cleaner Sink** Heavy duty sink size 465 x 410 x 285mm deep in enamelled fireclay complete with hardwood pad on the front edge and fitted bucket stainless steel grating and 20mm chrome plated wall mounted inclined bricon tap, chrome plate chain and rubber stopper and heavy gauge 40mmn chrome plated bottle trap, stainless steel legs and bearers and 40mm grid waste fitting. All as Twyfords "cleaners sink" or approved equivalent.	2	No.		
D	**Disabled Persons Shower Facility** Wheel chair accessible shower facility Comprising of the following:- **i**) shower rail **ii**) shower curtain **iii**) concealed shower valve with hose **iv**) shower diveter **v**) support rails **vi**) folding shower back seat and support **vii**) vandal resistant fixed shower head all to be as Twyford Doc M shower pack	1	Set		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Disabled Persons Water Closet and Wash Hand Basin Facility** Wheel chair accessible W.C facility Comprising of the following:- **i**) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow.The bowl shall be of size 375x560x420mm high.The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402 .The unit shall be complete with valveless cistern fittings including syphon, 1 /2" side inlet ballvalve, 3 /4" side overflow, plastics flushbend, inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mmhigh) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. **ii)** Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 1/2" chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. **iii)** Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.	4	Set		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F'-36 ……	0
2	Total carried forward from page F-37 ……	
3	Total carried forward from page F-38 ……	
4	Total carried forward from page F-39 ……	
5	Total carried forward from page F-40 ……	
	Total for Third floor left wing Carried Forward	

SANITARY FITTING SUMMARY PAGE

Item	Description	Amount (Kshs)
1	Total Sanitary Fittings for Ground floor left wing	
2	Total Sanitary Fittings for Ground floor right wing	
3	Total Sanitary Fittings for First floor left wing	
4	Total Sanitary Fittings for First floor right wing	
5	Total Sanitary Fittings for Second floor left wing	
6	Total Sanitary Fittings for Third floor left wing	
	Total for Sanitary fittings installations works	

Bill No. 3 :Plumbing and drainage					
	Left Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	INTERNAL PLUMBING				
	PPR Pipes				
	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 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	Pipe work-PPR PIPES				
A	25mm diameter pipework	260	Lm		
B	32mm diameter pipework	241	Lm		
C	40mm diameter pipework	205	Lm		
D	50mm diameter pipework	206	Lm		
E	65mm diameter pipework	115	Lm		
	Bends				
F	25mm diameter bend	70	No.		
G	32mm diameter bend	66	No.		
H	40mm diameter bend	20	No.		
I	50mm diameter bend	44	No.		
J	63mm diameter bend	12	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount(Kshs)
	Tees				
A	25mm equal tee	66	No.		
B	32mm equal tee	54	No.		
C	40mm equal tee	44	No.		
D	50mm equal tee	44	No.		
E	65mm equal tee	12	No.		
	Reducers				
H	32 x 25mm diameter reducer	124	No.		
I	40 x 25mm diameter reducer	65	No.		
J	40 x 32mm diameter reducer	64	No.		
K	50 x 32mm diameter reducer	12	No.		
L	50 x 40mm diameter reducer	24	No.		
M	65 x 50mm diameter reducer	36	No.		
N	65 x 40mm diameter reducer	36	No.		
	Male/Female Adapters (Brass threaded)				
O	25mm brass threaded adapter	124	No.		
P	32mm brass threaded adapter	90	No.		
Q	40mm brass threaded adapter	80	No.		
R	50mm brass threaded adapter	54	No.		
S	65mm brass threaded adapter	30	No.		
	Male/Female Bend (Brass threaded)				
T	20mm brass threaded bend	160	No.		
U	25mm brass threaded bend	150	No.		
V	32mm brass threaded bend	80	No.		
W	40mm brass threaded bend	160	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount(Kshs)
A	50mm brass threaded bend	44	No.		
B	65mm brass threaded bend	36	No.		
	Flexible Tubing				
C	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	155	No.		
	Threaded Brass Coupling				
D	25mm threaded brass coupling	180	No.		
E	32mm threaded brass coupling	160	No.		
F	40mm threaded brass coupling	166	No.		
G	50mm threaded brass coupling	44	No.		
H	65mm threaded brass coupling	54	No.		
	Valves				
I	25mm gate valve	16	No.		
J	32mm gate valve	15	No.		
K	40mm gate valve	11	No.		
L	50mm gate valve	8	No.		
M	65mm gate valve	8	No.		
	Unions				
N	25mm diameter pipe union	10	No.		
O	32mm diameter pipe union	22	No.		
P	40mm diameter pipe union	8	No.		
Q	50mm diameter pipe union	12	No.		
R	65mm diameter pipe union	12	No.		
	Pipe Sleeves				
S	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	25	Lm		
T	Supply, deliver and install a Plastic cylindrical roof water tank, capacity of tank to be **5,000 litres** and of preferred diameter 1500mm x 1960mm high. The tank to come complete with tank cover, mosquito proof inspection vent and to rest on wooden platform.	8	No.		
	Testing and Commissioning				
U	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount(Kshs)
1	Total carried forward from page F-43 ……	
2	Total carried forward from page F-44 ……	
3	Total carried forward from page F-45 ……	
Total for left wing installations Carried Forward		

	Right Wing				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount(Kshs)**
	INTERNAL PLUMBING				
	PPR Pipes				
	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 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	Pipe work-PPR PIPES				
A	20mm diameter pipework	180	Lm		
B	25mm diameter pipework	180	Lm		
C	32mm diameter pipework	220	Lm		
D	40mm diameter pipework	100	Lm		
E	50mm diameter pipework	145	Lm		
F	65mm diameter pipework	90	Lm		
	Bends				
G	20mm diameter bend	60	No.		
H	25mm diameter bend	60	No.		
I	32mm diameter bend	40	No.		
J	40mm diameter bend	22	No.		
K	50mm diameter bend	18	No.		
L	63mm diameter bend	11	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	25mm equal tee	50	No.		
B	32mm equal tee	50	No.		
C	40mm equal tee	30	No.		
D	50mm equal tee	20	No.		
E	65mm equal tee	12	No.		
	Reducers				
F	25 x 20mm diameter reducer	155	No.		
G	32 x 20mm diameter reducer	144	No.		
H	32 x 25mm diameter reducer	152	No.		
I	40 x 25mm diameter reducer	92	No.		
J	40 x 32mm diameter reducer	80	No.		
K	50 x 32mm diameter reducer	30	No.		
L	50 x 40mm diameter reducer	24	No.		
M	65 x 50mm diameter reducer	30	No.		
N	65 x 40mm diameter reducer	22	No.		
	Male/Female Adapters (Brass threaded)				
O	20mm brass threaded adapter	100	No.		
P	25mm brass threaded adapter	133	No.		
Q	32mm brass threaded adapter	122	No.		
R	40mm brass threaded adapter	60	No.		
S	50mm brass threaded adapter	40	No.		
T	65mm brass threaded adapter	30	No.		
	Male/Female Bend (Brass threaded)				
U	20mm brass threaded bend	90	No.		
V	25mm brass threaded bend	50	No.		
W	32mm brass threaded bend	30	No.		
X	40mm brass threaded bend	50	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	50mm brass threaded bend	22	No.		
B	65mm brass threaded bend	18	No.		
	Flexible Tubing				
C	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	140	No.		
	Threaded Brass Coupling				
D	25mm threaded brass coupling	90	No.		
E	32mm threaded brass coupling	50	No.		
F	40mm threaded brass coupling	120	No.		
G	50mm threaded brass coupling	22	No.		
H	65mm threaded brass coupling	33	No.		
	Valves				
I	25mm gate valve	14	No.		
J	32mm gate valve	18	No.		
K	40mm gate valve	16	No.		
L	50mm gate valve	12	No.		
M	65mm gate valve	8	No.		
	Unions				
N	25mm diameter pipe union	22	No.		
O	32mm diameter pipe union	44	No.		
P	40mm diameter pipe union	44	No.		
Q	50mm diameter pipe union	22	No.		
R	65mm diameter pipe union	24	No.		
	Pipe Sleeves				
S	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	18	Lm		
T	Supply, deliver and install a Plastic cylindrical roof water tank, capacity of tank to be **5,000 litres** and of preferred diameter 1500mm x 1960mm high. The tank to come complete with tank cover, mosquito proof inspection vent and to rest on wooden platform.	8	No.		
	Testing and Commissioning				
U	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F-47 ……	
2	Total carried forward from page F-48 ……	
3	Total carried forward from page F-49 ……	
Total for right wing installations Carried Forward		

PLUMBING COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	**Total for left wing installations**	
2	**Total for right wing installations**	
	Total for Plumbing installations works	

Bill No. 4:Foul Drainage					
Left Wing Third Floor					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	8	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	33	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	59	Lm		
D	50mm diameter waste pipe	60	Lm		
E	40mm diameter waste pipe	33	Lm		
F	32mm diameter waste pipe	34	Lm		
	Bends				
G	200mm diameter long radius bend	4	No.		
H	100mm diameter long radius bend	10	No.		
I	100mm diameter short radius bend	5	No.		
J	100mm diameter bend with access	8	No.		
K	100mm diameter sweep bend	2	No.		
L	50mm diameter sweep bend	18	No.		
M	40mm diameter sweep bend	14	No.		
N	32mm diameter sweep bend	22	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	2	No.		
B	100mm diameter sweep tee	18	No.		
C	50mm diameter sweep tee	12	No.		
D	40mm diameter sweep tee	15	No.		
E	32mm diameter sweep tee	33	No.		
	Access Caps				
H	50mm diameter access cap	18	No.		
I	40mm diameter access cap	22	No.		
J	32mm diameter access cap	23	No.		
	Boss Connectors				
K	100 x 50mm diameter boss connector	20	No.		
L	100 x 40mm diameter boss connector	12	No.		
	Single Branches				
M	100mm diameter single branch	14	No.		
	WC Connectors				
N	100mm diameter WC connector	15	No.		
	Traps				
O	100 x 50mm diameter floor trap and grating	22	No.		
	Total Carried Forward				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page F-52 ……	
2	Total carried forward from page F-53 ……	
	Total drainage for third floor Carried Forward	

	Left Wing Second Floor				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	8	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	15	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	125	Lm		
D	50mm diameter waste pipe	42	Lm		
E	40mm diameter waste pipe	20	Lm		
F	32mm diameter waste pipe	40	Lm		
	Bends				
G	200mm diameter long radius bend	2	No.		
H	100mm diameter long radius bend	15	No.		
I	100mm diameter short radius bend	2	No.		
J	100mm diameter bend with access	15	No.		
K	100mm diameter sweep bend	2	No.		
L	50mm diameter sweep bend	24	No.		
M	40mm diameter sweep bend	24	No.		
N	32mm diameter sweep bend	18	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	2	No.		
B	100mm diameter sweep tee	18	No.		
C	50mm diameter sweep tee	18	No.		
D	40mm diameter sweep tee	17	No.		
E	32mm diameter sweep tee	25	No.		
	Access Caps				
F	50mm diameter access cap	12	No.		
G	40mm diameter access cap	8	No.		
H	32mm diameter access cap	12	No.		
	Boss Connectors				
I	100 x 50mm diameter boss connector	20	No.		
J	100 x 40mm diameter boss connector	6	No.		
	Traps				
K	100 x 50mm diameter floor trap and grating	20	No.		
	Total Carried Forward				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page F-55 ……	
2	Total carried forward from page F-56 ……	
	Total drainage for Left Second Carried Forward	

	Right Wing First Floor				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	8	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	15	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	125	Lm		
D	50mm diameter waste pipe	42	Lm		
E	40mm diameter waste pipe	20	Lm		
F	32mm diameter waste pipe	40	Lm		
	Bends				
G	200mm diameter long radius bend	2	No.		
H	100mm diameter long radius bend	15	No.		
I	100mm diameter short radius bend	2	No.		
J	100mm diameter bend with access	15	No.		
K	100mm diameter sweep bend	2	No.		
L	50mm diameter sweep bend	24	No.		
M	40mm diameter sweep bend	24	No.		
N	32mm diameter sweep bend	18	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	2	No.		
B	100mm diameter sweep tee	18	No.		
C	50mm diameter sweep tee	18	No.		
D	40mm diameter sweep tee	17	No.		
E	32mm diameter sweep tee	25	No.		
	Access Caps				
F	50mm diameter access cap	12	No.		
G	40mm diameter access cap	8	No.		
H	32mm diameter access cap	12	No.		
	Boss Connectors				
I	100 x 50mm diameter boss connector	20	No.		
J	100 x 40mm diameter boss connector	6	No.		
	Traps				
K	100 x 50mm diameter floor trap and grating	20	No.		
	Total Carried Forward				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page F-58 ……	
2	Total carried forward from page F-59 ……	
	Total drainage for right first Carried Forward	

	Left Wing First Floor **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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	33	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	38	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	125	Lm		
D	50mm diameter waste pipe	42	Lm		
E	40mm diameter waste pipe	34	Lm		
F	32mm diameter waste pipe	48	Lm		
	Bends				
G	200mm diameter long radius bend	2	No.		
H	100mm diameter long radius bend	15	No.		
I	100mm diameter short radius bend	2	No.		
J	100mm diameter bend with access	15	No.		
K	100mm diameter sweep bend	2	No.		
L	50mm diameter sweep bend	24	No.		
M	40mm diameter sweep bend	24	No.		
N	32mm diameter sweep bend	18	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	2	No.		
B	100mm diameter sweep tee	18	No.		
C	50mm diameter sweep tee	18	No.		
D	40mm diameter sweep tee	22	No.		
E	32mm diameter sweep tee	25	No.		
	Access Caps				
F	50mm diameter access cap	12	No.		
G	40mm diameter access cap	12	No.		
H	32mm diameter access cap	12	No.		
	Traps				
I	100 x 50mm diameter floor trap and grating	32	No.		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F-61 ……	
2	Total carried forward from page F-62 ……	
	Total drainage for First left floor Carried Forward	

	Left Wing Ground Floor				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	270	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	300	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	60	Lm		
D	50mm diameter waste pipe	150	Lm		
E	40mm diameter waste pipe	80	Lm		
F	32mm diameter waste pipe	120	Lm		
	Bends				
G	200mm diameter long radius bend	10	No.		
H	100mm diameter long radius bend	120	No.		
I	100mm diameter short radius bend	20	No.		
J	100mm diameter bend with access	40	No.		
K	100mm diameter sweep bend	20	No.		
L	50mm diameter sweep bend	100	No.		
M	40mm diameter sweep bend	20	No.		
N	32mm diameter sweep bend	120	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	20	No.		
B	100mm diameter sweep tee	150	No.		
C	50mm diameter sweep tee	50	No.		
D	40mm diameter sweep tee	40	No.		
E	32mm diameter sweep tee	120	No.		
	Access Caps				
F	200mm diameter access cap	12	No.		
G	100mm diameter access cap	50	No.		
H	50mm diameter access cap	40	No.		
I	40mm diameter access cap	30	No.		
J	32mm diameter access cap	20	No.		
	Boss Connectors				
K	100 x 50mm diameter boss connector	25	No.		
L	100 x 40mm diameter boss connector	15	No.		
	Single Branches				
M	100mm diameter single branch	32	No.		
	WC Connectors				
N	100mm diameter WC connector	64	No.		
	Traps				
O	100 x 50mm diameter floor trap and grating	34	No.		
P	Standard 300 x 300 x 450mm masonry gully trap complete with concrete cover.	54	No.		
Q	Standard 300 x 300mm kitchen stainless floor grating	22	No.		
R	Standard 600 x 450mm manhole chamber complete with concrete cover.	49	No.		
	Weathering Slates and Vent Cowls				
S	100mm diameter weathering slate and apron.	22	No.		
T	100mm diameter vent cowl	24	No.		
	Total Carried Forward				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page F-64 ……	
2	Total carried forward from page F-65 ……	
	Total drainage for left wing ground floor Carried Forward	

	Right Wing Ground Floor				
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	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. **MuPVC and uPVC Waste and Soil pipework**				
A	200mm diameter heavy gauge golden brown UPVC pipe	250	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	221	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	123	Lm		
D	50mm diameter waste pipe	100	Lm		
E	40mm diameter waste pipe	120	Lm		
F	32mm diameter waste pipe	90	Lm		
	Bends				
G	200mm diameter long radius bend	22	No.		
H	100mm diameter long radius bend	120	No.		
I	100mm diameter short radius bend	28	No.		
J	100mm diameter bend with access	40	No.		
K	100mm diameter sweep bend	20	No.		
L	50mm diameter sweep bend	100	No.		
M	40mm diameter sweep bend	34	No.		
N	32mm diameter sweep bend	120	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	200mm diameter sweep tee	34	No.		
B	100mm diameter sweep tee	150	No.		
C	50mm diameter sweep tee	50	No.		
D	40mm diameter sweep tee	40	No.		
E	32mm diameter sweep tee	120	No.		
	Access Caps				
F	200mm diameter access cap	23	No.		
G	100mm diameter access cap	50	No.		
H	50mm diameter access cap	40	No.		
I	40mm diameter access cap	30	No.		
J	32mm diameter access cap	34	No.		
	Boss Connectors				
K	100 x 50mm diameter boss connector	25	No.		
L	100 x 40mm diameter boss connector	23	No.		
	Single Branches				
M	100mm diameter single branch	53	No.		
	WC Connectors				
N	100mm diameter WC connector	70	No.		
	Traps				
O	100 x 50mm diameter floor trap and grating	40	No.		
P	Standard 300 x 300 x 450mm masonry gully trap complete with concrete cover.	40	No.		
Q	Standard 300 x 300mm kitchen stainless floor grating	4	No.		
R	Standard 600 x 450mm manhole chamber complete with concrete cover.	20	No.		
	Weathering Slates and Vent Cowls				
S	100mm diameter weathering slate and apron.	22	No.		
T	100mm diameter vent cowl	23	No.		
	Total Carried Forward				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page F-67 ……	
2	Total carried forward from page F-68 ……	
	Total drainage for right wing ground floor Carried Forward	

DRAINAGE COLLECTION PAGE

Item	Description	Amount (Kshs)
1	**Total drainage for third floor left wing**	
2	**Total drainage for Second floor left wing**	
3	**Total drainage for First floor left wing**	
4	**Total drainage for First floor right wing**	
5	**Total drainage for Ground floor left wing**	
6	**Total drainage for Ground floor right wing**	
Total for Installation Drainage works		

Bill No. 5:Rain Water Drainage					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Rainwater drainage				
A	100mm diameter heavy gauge grey mUPVC down pipes	700	Lm		
B	100mm diameter 45^0 bend	150	No.		
C	100mm diameter sweep bend	148	No.		
D	50mm diameter bend	150	No.		
E	100mm diameter tee	100	No.		
F	100mm diameter cast iron fulbora	155	No.		
	Supporting Brackets				
G	Allow for suitable supporting steel brackets for anchoring and supporting drainage pipes bends on the lower floor. To be painted to match the walling colour.	380	No.		
	Testing and Commissioning				
H	Allow for testing and commissioning of the plumbing and drainage installations to the satisfaction of the Engineer.	1	Item		
	Total Carried Forward				

Bill No 6:Water and Fire Reticulation					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Supply, deliver and install Heavy Duty Poly Ethylene HDPE pressure pipe schedule 80 pipework PN 25 to IS0 4427 and DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	GMS Pipework				
A	100mm diameter pipework	560	Lm		
B	65mm diameter pipework	200	Lm		
C	50mm diameter pipework	200	Lm		
D	25mm diameter pipework	300	Lm		
	Extra over GMS Pipework for the following:				
	Bends				
E	100mm diameter bend/elbow	15	No		
F	65mm diameter bend/elbow	15	No		
G	50mm diameter bend/elbow	40	No		
H	25mm diameter bend/elbow	45	No		
	Tees				
I	100mm diameter equal tee	18	No		
J	65mm diameter equal tee	6	No		
K	50mm diameter equal tee	22	No		
L	25mm diameter equal tee	14	No		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Reducers				
A	100x65mm diameter reducer	8	No		
B	100x50mm diameter reducer	8	No		
C	100x25mm diameter reducer	12	No		
D	65x50mm diameter reducer	8	No		
E	50x25mm diameter reducer	20	No		
	Excavations				
F	Excavate trench in hard soil/murram 600mm wide and depth not exceeding 1000mm deep and average 850mm deep, prepare bed with red soil/murram of particle size not more than 20 mm to a depth of 750mm. Bed shall be approved by Engineer before laying of pipes. Fill with same material as above and compact in layers of 75 mm. Cart away surplus soil.	1800	LM		
	Valves				
G	100mm diameter sluice valve complete with 2No. connecting flanges.	2	No		
H	65mm diameter sluice valve complete with 2No. connecting flanges.	2	No		
I	50mm diameter approved high 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 tubing and complete with round male threaded transition fittings and associated unions.	8	No		
J	25mm diameter ditto	8	No		
	Air release Valves				
K	50mm diameter air release valve	1	No		
	Drain Valves				
L	100mm diameter drain valve complete with connecting flanges.	1	No		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Unions				
A	50mm diameter union	6	No		
B	25mm diameter union	4	No		
	Valve Chamber				
C	Standard precast concrete valve chamber of size 450 x 450 x 450mm deep made of concrete (1:3:6) base, including formwork, excavations backfilling and disposal.	5	No		
	Stand Pipe				
D	15mm diameter hose bib tap suitable for connecting hose pipe complete with threaded adaptors. The tap to be complete with 5meter long 15mm diameter GMS pipe, bends support, etc. The chrome plated bib tap to be as Cobra ref.108 hose bib taps or equal and approved.	25	No		
	Pipe Sleeves				
E	100mm diameter heavy duty PVC Class 41pipe sleeves for crossing over pathways and driveways. The sleeves will be encased in 150mm concrete sorround.	60	Lm		
	Fire Hydrants				
F	65mm diameter screw down type fire hydrant conforming to BS 750: 1977 complete with Copper alloy spindle complying with requirements of BS 2874 and having a thread machined of trapezoidal form, Cast iron spindle cap secured to the spindle by an M12 hexagonal socket set screw to BS 4168, A tapered key suitable for the spindle cap, A screwed outlet with cast iron cap attached to the hydrant body by a chain. The hydrant shall have the hydrant valve, 100mm stand pipe above ground (1000mm high), plastic/metal adaptor, bends and any other necessary accessories necessary for the proper functioning of the hydrant. The hydrant to be as 'Greenfield' type or approved equivalent.	10	No.		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Fire Hose				
A	65mm diameter, 30 metres long canvas fire hose capable of with standing 10 bar working pressure complete with branch pipe, nozzle, female instantaneous coupling head, hanging hook and other associated fittings for its proper functioning. To be as Germania single jacket fire hose model GSJ 60 or equal and approved.	6	No.		
	Fire Hydrant Markers				
B	Standard precast concrete ware line marker, post marked 'FH' set in concrete (1:3:6) base, including formwork, excavations backfilling and disposal. The plate to be painted with blue gloss oil paint.	6	No		
	Sluice Valve Indicator Plates				
C	Standard precast concrete Sluice valve marker post marked 'SV' set in concrete (1:3:6) base, including formwork, excavations backfilling and disposal. The plate to be painted with blue gloss oil paint.	6	No		
	Gate Valve Indicator Plates				
D	Standard precast concrete Sluice valve marker post marked 'GV' set in concrete (1:3:6) base, including formwork, excavations backfilling and disposal. The plate to be painted with blue gloss oil paint.	6	No		
	Water Line Markers				
E	Standard precast concrete water line marker, post marked 'WL' set in concrete (1:3:6) base, including formwork, excavations backfilling and disposal. The plate to be painted with blue gloss oil paint.	6	No		
	Sterilization				
F	Allow for flushing out and sterilizing the whole system with chlorine to the satisfaction of the engineer	1	Sum		
	Testing and Commissioning				
G	Allow for setting to work, testing and commissioning of the whole water reticulation system to the satisfaction of the Engineer.	1	Item		
Total Carried Forward					

COLLECTION PAGE FOR WATER RETICULATION

Item	Description	Amount (Kshs)
1	Total carried forward from page F-72	
2	Total carried forward from page F-73	
3	Total carried forward from page F-74	
4	Total carried forward from page F-75	
Total for Water Reticulation Carried to Summary Page		

Bill No 7:Fire Protection					
Ground Floor Left Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Fire Fighting				
	Supply, deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.				
	Hose Reel System				
	Hose Reel				
A	Swinging type hosereel fitted with 30 metres long, 20 mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	6	No.		
	GMS Pipes				
B	25mm diameter GMS pipework	15	Lm		
C	50mm diameter GMS pipework	15	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	5	No.		
E	50mm diameter bend	6	No.		
	Tees				
F	50mm diameter equal Tee	6	No.		
	Reducers				
G	50 x 25 mm diameter reducer	8	No.		
	Valves				
H	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	8	No.		
I	50mm diameter ditto	5	No.		
	Unions				
A	25mm diameter pipe unions	8	No.		
B	50mm diameter pipe unions	4	No.		
	Painting				
E	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Water Fire Extinguisher				
A	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	9	No		
	Carbon Dioxide Gas Fire Extinguisher				
B	9 litres carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	9	No		
	DCP Fire Extinguisher				
C	Dry Chemical Powder fire extinguisher complete with initial charge and mounting brackets.	9	No		
	Manual Bell				
D	Manual Bell	9	No		
	Fire Portables cabinet				
E	Allow for fire cabinets 300x800x600mm for the above extinguishers to engineers approval	9	No		
F	Allow for fire hosereel cabinets 300x800x800mm for the above hosereels to engineers approval	5	No		
	Fire Notices				
G	Allow for fire signage for the hose reel system, fire exits,fire instructions as directed by engineer	9	No		
Total Carried Forward					

	COLLECTION PAGE FOR FIRE FIGHTING WORKS		
Item	**Description**		**Amount (Kshs)**
1	Total from page F-77	……	
2	Total from page F-78	……	
Total cost Ground floor left			

Ground Floor Right Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Fire Fighting				
	Supply, deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.				
	Hose Reel System				
	Hose Reel				
A	Swinging type hosereel fitted with 30 metres long, 20 mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	8	No.		
	GMS Pipes				
B	25mm diameter GMS pipework	15	Lm		
C	50mm diameter GMS pipework	25	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	5	No.		
E	50mm diameter bend	6	No.		
	Tees				
F	50mm diameter equal Tee	6	No.		
	Reducers				
G	50 x 25 mm diameter reducer	6	No.		
	Valves				
H	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	5	No.		
I	50mm diameter ditto	1	No.		
	Unions				
A	25mm diameter pipe unions	5	No.		
B	50mm diameter pipe unions	1	No.		
	Painting				
E	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Water Fire Extinguisher				
A	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
	Carbon Dioxide Gas Fire Extinguisher				
B	9 litres carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
	DCP Fire Extinguisher				
C	Dry Chemical Powder fire extinguisher complete with initial charge and mounting brackets.	8	No		
	Manual Bell				
D	Manual Bell	8	No		
	Fire Portables cabinet				
E	Allow for fire cabinets 300x800x600mm for the above extinguishers to engineers approval	8	No		
F	Allow for fire hosereel cabinets 300x800x800mm for the above hosereels to engineers approval	8	No		
	Fire Notices				
G	Allow for fire signage for the hose reel system, fire exits,fire instructions as directed by engineer	5	No		
	Total Carried Forward				

COLLECTION PAGE FOR FIRE FIGHTING WORKS

Item	Description		Amount (Kshs)
2	Total from page F-80	……	
3	Total from page F-81	……	
	Total cost for ground floor right		

First Floor Right Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Fire Fighting Supply, deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.				
	Hose Reel System				
	Hose Reel				
A	Swinging type hosereel fitted with 30 metres long, 20 mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	5	No.		
	GMS Pipes				
B	25mm diameter GMS pipework	15	Lm		
C	50mm diameter GMS pipework	25	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	5	No.		
E	50mm diameter bend	6	No.		
	Tees				
F	50mm diameter equal Tee	6	No.		
	Reducers				
G	50 x 25 mm diameter reducer	6	No.		
	Valves				
H	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	5	No.		
I	50mm diameter ditto	1	No.		
	Unions				
A	25mm diameter pipe unions	5	No.		
B	50mm diameter pipe unions	1	No.		
	Painting				
E	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Water Fire Extinguisher				
A	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	5	No		
	Carbon Dioxide Gas Fire Extinguisher				
B	9 litres carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	5	No		
	DCP Fire Extinguisher				
C	Dry Chemical Powder fire extinguisher complete with initial charge and mounting brackets.	6	No		
	Manual Bell				
D	Manual Bell	5	No		
	Fire Portables cabinet				
E	Allow for fire cabinets 300x800x600mm for the above extinguishers to engineers approval	5	No		
F	Allow for fire hosereel cabinets 300x800x800mm for the above hosereels to engineers approval	5	No		
	Fire Notices				
G	Allow for fire signage for the hose reel system, fire exits,fire instructions as directed by engineer	5	No		
Total Carried Forward					

COLLECTION PAGE FOR FIRE FIGHTING WORKS

Item	Description		Amount (Kshs)
2	Total from page F-83	……	
3	Total from page F-84	……	
	Total cost Right first floor		

First Floor Left Wing					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Fire Fighting Supply, deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.				
	Hose Reel System				
	Hose Reel				
A	Swinging type hosereel fitted with 30 metres long, 20 mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	6	No.		
	GMS Pipes				
B	25mm diameter GMS pipework	30	Lm		
C	50mm diameter GMS pipework	33	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	10	No.		
E	50mm diameter bend	12	No.		
	Tees				
F	50mm diameter equal Tee	6	No.		
	Reducers				
G	50 x 25 mm diameter reducer	6	No.		
	Valves				
H	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	10	No.		
I	50mm diameter ditto	5	No.		
	Unions				
A	25mm diameter pipe unions	6	No.		
B	50mm diameter pipe unions	1	No.		
	Painting				
E	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Water Fire Extinguisher				
A	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	20	No		
	Carbon Dioxide Gas Fire Extinguisher				
B	9 litres carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
	DCP Fire Extinguisher				
C	Dry Chemical Powder fire extinguisher complete with initial charge and mounting brackets.	8	No		
	Manual Bell				
D	Manual Bell	8	No		
	Fire Portables cabinet				
E	Allow for fire cabinets 300x800x600mm for the above extinguishers to engineers approval	8	No		
F	Allow for fire hosereel cabinets 300x800x800mm for the above hosereels to engineers approval	10	No		
	Fire Notices				
G	Allow for fire signage for the hose reel system, fire exits,fire instructions as directed by engineer	5	No		
Total Carried Forward					

COLLECTION PAGE FOR FIRE FIGHTING WORKS

Item	Description		Amount (Kshs)
2	Total from page F-86	……	
3	Total from page F-87	……	
	Total first floor, Second and Third left wing cost		

SUMMARY PAGE

Item	Description		Amount (Kshs)
1	Total carried forward from collection page for ground floor left wing	……	
2	Total carried forward from collection page for ground floor right wing	……	
3	Total carried forward from collection page for first floor right wing	……	
4	Total carried forward from collection page for 1st, 2nd, 3rd floor left wing **X 3**	……	
Total Carried Forward			

Bill No 8:Water Tanks

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Low Level Water Tank** **Hot dipped galvanised** low level water storage tank as **"Braithwaite"** or approved equiavalent made from **6mm thick** cold pressed mild steel sectional plates of size **1000mm x 1000mm**. Capacity of tank to be **168,000 Litres** with preferred dimensions **7,000 x 6,000 by 4,000mm** high. The tank to be Hot Dipped Galvanised to approval All nozzles/pipe connections to be threaded. The tank to come complete with: - 1 No. Highly visible Water Level Indicator - 1 No. Lockable, hinged Steel Cover Manhole - 1 No. internal ladder - Appropriate float valve chamber - 1 No. external cat ladder to ground Level with a hooped safety cage - Pitched dustproof and weatherproof tank cover made of flat 4mm thick galvanized steel sheets capable of withstanding loading imposed by the maintenance personnel. - All necessary cleats, stays, braces, rafters and reinforcements - All necessary zinc coated bolts, nuts, washers, non toxic strip sealant to make all joints leak proof. The tank to come accompanied by 8 No., 6mm thick, 50mm wide flate plate 8,200mm long laid above the concrete piers before tank placement. Tank connections include 2 no.50mm inlets, 100mm outlet, 100mm overflow, 100mm washout, 100mm spare outlet	1	Item		
B	**GRP High Level Water Tank for the site** Supply, deliver and assemble a high level water tanks, made of Glass Reinforced Panels sectional tank plates 6mm thick plates (type 1 and 4) and of size 1000mm x 1000mm capacity of tank to be 75,000 litres and of preferred dimensions 5000mm x 5000mm x 3000mm. The tank to come complete with tank cover, mosquito proof inspection vent, internal stays, jointing material, bolts and nuts -100mm diameter overflow -100mm diameter outlets -100mm diameter inlet -100mm diameter washout with gate valve	1No.			
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Booster Pumps				
A	Set of automatic electrically driven twin Booster pumps. One duty and the other one standby with automatic changeover, capable of delivering 5 metres per hour against a head of 40 meters. The pumpset shall be complete with 100 litres pressure vessel (as Dayliff pressure set or equal and approved) and all accessories required for proper and satisfactory operation. It includes pressure switches, time delay switch, a switch to protect against dry run, timer, gate valves and non-return valves. The pump to be as GRUNDFOS or approved equivalent. Pump to be installed on mild steel platform.	1	Set		
	Control Panel				
B	Control panel for above pumps with contactors, over voltage and under voltage protection relays, MCBs, timer, start/stop push buttons, internal buttons with automatic changeover, 'running' and 'trip' neon lights control system and button for for change from automatic to manual operation. All these shall be housed in a lockable cabinet (with integral isolator) made from SWG 18 mild steel sheet that is oven powder coated . There shall also be an adjustable time delay switch to ensure pumping cycles are controlled to not more than 6 per hour, cables, low level cut-out switch in low level tank and regulator. Each pump should run for twelve hours per day.	1	Item		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	ASSOCIATED PIPEWORK *Supply, deliver and install Heavy Duty Poly Ethylene HDPE pressure pipe schedule 80 pipework PN 25 to IS0 4427 and DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.*				
A	100mm pipe drop pipe to pumps	40	Lm		
B	100mm pipe drop pipe for overflow	40	Lm		
	Sluice Valve				
C	100mm diameter Sluice Valve	1	No		
	Non Return Valve				
D	100mm diameter approved high pressure non- return valve to BS 1952. The non-return valve to be as "Pegler" or approved equivalent.	1	No		
	Tees				
E	100mm diameter equal tee	2	No		
	Bends/Elbows				
F	100mm diameter bend/elbows	4	No		
	Valve Chamber				
G	Valve chamber size 750 x 750 x 600mm deep with 100mm concrete (1: 3: 6) base 100mm block sides rendered all round in cement and sand (1:4) and with approved hinged and flanged cast iron cover and frame including all necessary excavation, disposal and form work.	1	No		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Hosereel Pumpset** Set of automatic electrically driven twin hosereel pumps. One duty and the other one standby with automatic changeover, capable of delivering 5 metres per hour against a head of 40 meters. The pumpset shall be complete with 100 litres pressure vessel (as Dayliff pressure set or equal and approved) and all accessories required for proper and satisfactory operation. It includes pressure switches, time delay switch, a switch to protect against dry run, timer, gate valves and non-return valves. The pump to be as GRUNDFOS or approved equivalent. Pump to be installed on mild steel platform.	1	Set		
B	**Control Panel** Control panel for above pumps with contactors, over voltage and under voltage protection relays, MCBs, timer, start/stop push buttons, internal buttons with automatic changeover, 'running' and 'trip' neon lights control system and button for for change from automatic to manual operation. All these shall be housed in a lockable cabinet (with integral isolator) made from SWG 18 mild steel sheet that is oven powder coated . There shall also be an adjustable time delay switch to ensure pumping cycles are controlled to not more than 6 per hour, cables, low level cut-out switch in low level tank and regulator. Each pump should run for twelve hours per day.	1	Item		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	ASSOCIATED PIPEWORK Supply, deliver and install galvanized mild steel pipes to BS 1387 class „B" with screwed and socketed joints to BS 134 and 1256 and of approved manufacturer with galvanizing to BS 729. Tenderers must allow in their pipe work prices for all the couplings, unions, connectors joints, holder bats, reducers etc. as required in the running length of the pipework and also where necessary for pipe fixing clips, plugged and screwed.				
A	100mm GMS pipe	330	Lm		
	Gate Valve				
B	100mm diameter approved high pressure gate valve to BS 1952. The gate valve to be as "Pegler" or approved equivalent.	2	No		
	Tees				
C	100mm diameter equal tee	15	No		
	Bends/Elbows				
D	100mm diameter bend/elbows	30	No		
	Valve Chamber				
E	Valve chamber size 750 x 750 x 600mm deep with 100mm concrete (1: 3: 6) base 100mm block sides rendered all round in cement and sand (1:4) and with approved hinged and flanged cast iron cover and frame including all necessary excavation, disposal and form work.	2	No		
	Total Carried Forward				

COLLECTION PAGE FOR WATER TANKS		
Item	**Description**	**Amount (Ksh.)**
A	Total carried from Page F-90	
B	Total carried from Page F-91	
C	Total carried from Page F-92	
D	Total carried from Page F-93	
E	Total carried from Page F-94	
Total amount for Water Storage Tanks carried to Summary page		

Bill 9. SOCCER FIELD IRRIGATION

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Sprinkler Nozzle				
A	Sprinkler nozzle with arc setting of 50 to 360 degrees.radius of 4.9m to 14m,flow of 0.07 to 3.23m3/hr ,maximum pressure rating of 4.5bar ,nozzle trajectory of 25 degees with rubber cover as Hunter Nozzle I-20 or Approved Equivalent	50	Item		
	Electric Control Valve				
B	Electric Control Valve with fibre reinforved diapharm,solenid with captive plunger,external and internal manual bleed with flow of 9m3 per hr as Hunter ICV 101G or Approved Equivalent	5	No.		
C	ditto but with flow of 34m3 per hr as Hunter ICV 151G or Approved Equivalent	5	No.		
D	ditto but with flow of 45m3 per hr as Hunter ICV 201G or Approved Equivalent	5	No.		
	Quick Coupler				
E	Quick coupler with heavy thermoplastic locking and non locking covers,winged stabilization,ACME key connection,spring loaded covers for positive closing as Hunter HQ- 44 -RC-AW or Approved Equivalent	10	No.		
	Irrigation Controller				
F	Irrigation controller which intergrates local weather,enaled for upto 16 stations ,Wi fi enabled,Built in milliamp sensor,ROAM XL compatible,Touchscreen interface,Predictive Watering Adjustments,Flowmeter detection as Hunter PRO C Hydrawise controller HPC 401 E or Approved Equivalent.Allow for any other accesories and softwares including Hydrawise Cloud and Irigation management software	1	No.		
	Flow Meter				
G	Flow meter to show water use by zone as Hunter HC-150-Flow B or Approved Equivalent	1	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Supply, deliver and install Heavy Duty Poly Ethylene HDPE pressure pipe schedule 80 pipework PN 25 to IS0 4427 and DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	Pipe work				
A	32mm diameter pipework	600	Lm		
B	40mm diameter pipework	300	Lm		
C	50mm diameter pipework	120	Lm		
D	65mm diameter pipework	25	Lm		
E	75mm diameter pipework	25	Lm		
	Bends				
F	32mm diameter bend	123	No.		
G	40mm diameter bend	18	No.		
H	50mm diameter bend	8	No.		
I	65mm diameter bend	30	No.		
J	75mm diameter bend	4	No.		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Tees				
A	32mm equal tee	40	No.		
B	40mm equal tee	25	No.		
C	50mm equal tee	16	No.		
D	65mm equal tee	24	No.		
E	75mm equal tee	2	No.		
	Reducers				
F	32 x 25mm diameter reducer	78	No.		
G	40 x 32mm diameter reducer	30	No.		
H	50 x 32mm diameter reducer	18	No.		
I	50 x 40mm diameter reducer	12	No.		
J	65 x 40mm diameter reducer	12	No.		
K	65 x 50mm diameter reducer	12	No.		
L	75 x 65mm diameter reducer	2	No.		
	Male/Female Adapters				
M	32mm brass threaded adapter	78	No.		
N	40mm brass threaded adapter	12	No.		
O	50mm brass threaded adapter	12	No.		
P	65mm brass threaded adapter	30	No.		
Q	75mm brass threaded adapter	2	No.		
	Threaded Brass Coupling				
R	32mm threaded coupling	18	No.		
S	40mm threaded coupling	12	No.		
T	50mm threaded coupling	6	No.		
U	65mm threaded coupling	6	No.		
V	75mm threaded coupling	1	No.		
Total Carried Forward					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Isolating Valves				
A	40mm gate valve	15	No.		
B	50mm gate valve	4	No.		
C	65mm gate valve	8	No.		
D	75mm gate valve	2	No.		
	Unions				
E	40mm diameter pipe union	15	No.		
F	50mm diameter pipe union	4	No.		
G	65mm diameter pipe union	8	No.		
H	75mm diameter pipe union	2	No.		
	Sprinkler Pumpset				
I	Set of automatic electrically driven twin Booster pumps. One duty and the other one standby with automatic changeover, capable of delivering 40 metres per hour against a head of 120 meters. The pumpset all accessories required for proper and satisfactory operation. It includes pressure switches, time delay switch, a switch to protect against dry run, timer, gate valves and non-return valves. The pump to be as GRUNDFOS CR 45-6 or approved equivalent. Pump to be installed on mild steel platform.	2	Item		
	Pressure Vessel				
J	200 litres pressure vessel and all accessories required for proper and satisfactory operation.The pressure vessel to be of 10 Bar WRAS approved as LOWARA or approved equivalent.	2	No.		
	Pipe Sleeves				
K	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	20	Lm		
	Total Carried Forward				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Wiring				
A	Allow for all wiring from local isolator supplied by others within two meter to the irrigation systems	1	Item		
	Water Connection				
B	Allow for connections to rising mains for all solar heating systems and to the hot water delivery line.	1	Item		
	Sterilization				
C	Allow for flushing out and sterilizing the whole system with chlorine to the satisfaction of the Project Engineer.	1	Item		
	Testing and commisioning				
D	Allow for testing and commissioning for systems to the satisfaction of the engineer.	1	Item		
Total Carried Forward					

SUMMARY PAGE FOR SOCCER FIELD IRRIGATION		
Item	**Description**	**Amount (Ksh)**
1	Total carried forward from page F-96	
2	Total carried forward from page F-97	
3	Total carried forward from page F-98	
4	Total carried forward from page F-99	
5	Total carried forward from page F-100	
	Totals for solar water heating installations	

SUMMARY PAGE

Item	Description	Total Costs
1	Preliminaries	500,000
2	Total for sanitary fittings Installation Works	
3	Total for plumbing Installation Works	
4	Total for Drainage Installation Works	
5	Total for Rainwater drainage Installation Works	
6	Total for water reticulation Installation Works	
7	Total for fire reticulation installation Works	
8	Total for Tank Level and Low level water tank installation Works	
9	Total for Soccer Irrigation installation Works	
	Total Sum	
10	Contigency provision for the above works(5 %)	
	Totals for Plumbing and Drainage Installation Works Carried to Form of Tender	

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

ITEM	DESCRIPTION	UNIT	RATE (Kshs)
A	Automatic urinal bowl	No.	
B	Countertop wash hand basin	No.	
C	Robe hook	No.	
D	Mixer wash hand basin tap	No.	
E	Automatic soap dispenser	No.	
F	Kitchen sink single bowl single drain	No.	
G	Paper Dispenser towel	No.	
H	Arabic shower	No.	
I	Mahole 600 X 450mm mahole with heavy duty cover depth to be minimum 600mm	No.	
J	Water meter Kents	No.	

G: TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

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/Engineer.
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.**

S/NO	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Water closet WC pan			
B	Water closet flush valves			
C	Wash hand basin pedestal			
D	Wash hand basin tap delay press			
E	Toilet roll holder			
F	Shower mixer			
G	Tower Rail			
H	Soap Dish			
I	Bathroom tap			
J	Tiolet Brush and holder			
K	Soap dispenser			
	Stainless steel urinal slap			
L	Hand driers			
N	Cleaner sink			

	Disabled persons water closet Close coupled water closet suite duravit Kitchen sink double bowl double drainer			

Catalogue must be attached for all the items in the schedule of material above

SECTION H:

STANDARD FORMS

NOTE:

ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BE PART OF THE EVALUATION CRITERIA

STANDARD FORMS

GE

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5. SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS……..…… 124

1 KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

……..	……..……	……..……
Title	Signature	Date

2 CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS

Work performed on works of a similar nature and volume over the last five years.

PROJECT NAME	NAME OF CLIENT	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

I certify that the above works were successfully carried out and completed by ourselves.

Title Signature Date

3 SCHEDULE OF ON-GOING PROJECTS

Details of on-going or committed projects, including expected completion date.

PROJECT NAME	NAME OF CLIENT	CONTRACT SUM	% COMPLETE	COMPLETION DATE

I certify that the above works are currently being carried out by ourselves.

……. …… …….

Title Signature Date

3 DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH THE TENDERER IS INVOLVED AS ONE OF THE PARTIES

1. ._____.
2. ._____
3. ._____.
4. ._____.
5. ._____.
6. ._____.
7. ._____.
8. ._____.
9. ._____.
10. ._____.

4 SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)

SPORTS KENYA

BOREHOLE FOR ATHLETIC/FOOTBALL STADIUM DESIGN PROPOSAL.

VOLUME 3/3

SPECIFICATION AND BILL OF QUANTIES

FOR

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISIONING OF

BOREHOLE DRILLING AND EQUIPPING INSTALLATION WORKS

CLIENT

SPORTS KENYA,
STATE DEPARTMENT FOR SPORTS
P.O BOX 49849 - 00100,
NAIROBI.

Prepared By :
KENYA SCHOOL OF TVET
P.o BOX 44600-00100
NAIROBI.

AUGUST, 2024

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PART 1: TENDERING PROCEDURES

TENDER EVALUATION CRITERIA

Note: The tenderer who shall be domestic subcontractor to the Main Contractor upon award of the tender, must comply with the following conditions and instructions failure to which the tender shall be rejected.

After tender opening, the tenders will be evaluated in **2 stages**, namely:

1. Preliminary Evaluation;
2. Technical Evaluation;

STAGE 1: PRELIMINARY EVALUATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These conditions shall include the following:

i) Company Certificate of incorporation/registration;
ii) Current National Construction Authority Registration certificate (NCA 8 and above in Mechanical Engineering Services – Air-Conditioning, Mechanical Ventilation and Fire Suppression, categories);
iii) NCA current annual practicing license,
iv) Valid Tax Compliance Certificate;
v) Dully filled (in ink) Bills of quantities in the format provided, signed and stamped Summary Page

Note:

On compliance with Technical Specifications, bidders shall supply equipment /items which comply with the technical specifications set out in the bid document. In this regard, the bidder will be required to submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items. Such brochure/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;
(iii) Material of manufacture;
(iv) Electrical power ratings; and
(v) Any other necessary requirements so as to comply with the bid technical specifications.

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. Bidders not complying with **any** of the key Technical Schedule specifications shall be **Non-Responsive** while those meeting all the key technical specifications shall be **Responsive (evaluation committee may add more key requirements from the bid technical specifications.**

The tenderer shall also fill in the Technical Schedule as Specified in the tender document for Equipment"s and items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/ Equipment they propose to supply.

The tenderers who do not satisfy any of the above mandatory requirements shall be considered Non-Responsive and their tenders will not be evaluated further.

STAGE 2 TECHNICAL EVALUATION

A) Assessment for eligibility

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

TABLE 1: Assessment for Eligibility

Item	Description	YES/NO
1.	**Compliance with Technical Specifications** *(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)*	
2.	**Qualification and Experience of Key Personnel**	
	Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates) **a) Director of the firm** • Holder of at least a diploma with 10 years" experience in a relevant field	
	b) Project Manager/ Site Agent • Holder of at least a degree with 5 years" experience in a relevant field	
	c) At least 3 No artisans • Holder of at least a certificate with 5 years" experience in relevant Engineering field	
3.	**Experience of the firm in similar services: (*Borehole Drilling and equipping installation*)** a) Provide Three (3No.) projects of similar nature, complexity or magnitude) between the Period 2019 – 2023: **(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)**	
4.	**Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)** The tenderer ***must*** show proof of ownership or leasing of the following equipment: - a) **Relevant Transport (at least 1No.)** • Means of transport b) **Relevant Equipment (at least 3No.)** • Has relevant equipment for work being tendered	
	QUALIFIED YES / NO	

Noncompliance with the Technical Evaluation will render the Tenderer Non responsive and therefore unqualified for further evaluation:

PART II - WORKS REQUIREMENTS

B. GENERAL MECHANICAL SPECIFICATIONS

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 minimize 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 weeks" 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.

2.08.5 Shop drawings

Before manufacture or Fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

2.09 **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.

C: PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

GENERAL

SCOPE OF WORKS

The works to be carried out under this sub-contract comprise Supply, installation, testing and commissioning of the following: -

a) **Borehole Drilling and equipping Installation works**

BROCHURES FOR DEVICES

For consideration and qualification tenderers shall, at their own cost, provide colored manufacturer"s brochures detailing technical literature and specifications where applicable

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

3.2MATERIALS AND STANDARDS

3.2.1 Pipework and Fittings

Pipework materials are to be used as follows:

i. **Galvanized Steel Pipework**

Galvanized steel pipe works 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.

ii. **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.

iii. CPVC piping

PVC (polyvinyl chloride) that has been chlorinated via a free radical chlorination reaction. CPVC is produced by adding chlorine to PVC in a water slurry or fluidized bed chlorination process. The chlorination reaction is initiated by ultraviolet light. The chlorinated PVC is compounded with ingredients necessary for the desired properties for further processing. The chlorine added to PVC gives CPVC higher temperature performance and improved fire and corrosion resistance.

Should conform to ASTM D2846 standard and ASTM F441 Standard for chlorinated poly vinyl chloride pipes.

Short copper connection tubes between galvanized pipe work and sanitary fitments 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.

b) **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.

c) **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.

ii. 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-meter centers.
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.

iii. 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.

iv. 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**

v. 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.

vi. 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 Littleshampton, 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 builder"s 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.

vii. 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 meters 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.

viii. <u>Expansion Joints and Anchors</u>

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 **<u>Sanitary Appliances</u>**

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. They shall be as described in the bill of quantities.

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.

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 galvanized steel wire guard.
Access for rodding and testing shall be provided at the foot of each stack.

c) <u>Sanitary Appliances</u>

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 ten hours 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.

ix. 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:

- Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- 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 sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization 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.

BILLS OF QUANTITIES

STATEMENT OF COMPLIANCE

a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.

b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ……..……. *for and on behalf of the Tenderer*

Date: ……

Official Rubber Stamp: ……..……

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. 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.

4.4. 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.

4.5. 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.

4.6. 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.

4.7. 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.

4.9 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-Clause13.5 and Clause 13.6 of the General Conditions of contract.

4.10 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.

4.11 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.

4. 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 a 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 done before such work is cover-up.

5.5 All items that have not been measured and therefore not subject to tenders 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 "Provisional Sum for Contingencies" and "Provisional Sum for Fluctuations".

x. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2nd edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*

2. The Site is situated in **KENYA.** It is approximately **……...** Access to the site shall be through**……..…** This 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 progress on 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 are 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, water pipes 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. They 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 at own 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.

24. 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.

25. 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 his rates.

26. The Contractor shall provide temporary sheds, offices mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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 tore move 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.

35. 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.

36. The Contractors 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.

37. The Contractors 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 there from in the build-up of rates.

38. 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.

39. 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.

40. 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 VAT 1.19 as instructed elsewhere.

41. 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.

SPORTS KENYA

15K ATHLETIC/FOOTBALL STADIUM DESIGN PROPOSAL.

VOLUME 3/3

SPECIFICATION AND BILL OF QUANTITIES

FOR

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISIONING OF

AIR-CONDITIONING, FIRE SUPPRESSION AND MECHANICAL VENTILLATIONS INSTALLATION WORKS

CLIENT

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AUGUST, 2024

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PART 1: TENDERING PROCEDURES

TENDER EVALUATION CRITERIA

Note: The tenderer who shall be domestic subcontractor to the Main Contractor upon award of the tender, must comply with the following conditions and instructions failure to which the tender shall be rejected.

After tender opening, the tenders will be evaluated in **2 stages**, namely:

1. Preliminary Evaluation;
2. Technical Evaluation;

STAGE 1: PRELIMINARY EVALUATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document. These conditions shall include the following:

i) Company Certificate of incorporation/registration;
ii) Current National Construction Authority Registration certificate (NCA 8 and above in Mechanical Engineering Services – Air-Conditioning, Mechanical Ventilation and Fire Suppression, categories);
iii) NCA current annual practicing license,
iv) Valid Tax Compliance Certificate;
v) Dully filled (in ink) Bills of quantities in the format provided, signed and stamped Summary Page

Note:

On compliance with Technical Specifications, bidders shall supply equipment /items which comply with the technical specifications set out in the bid document. In this regard, the bidder will be required to submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items. Such brochure/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;
(iii) Material of manufacture;
(iv) Electrical power ratings; and
(v) Any other necessary requirements so as to comply with the bid technical specifications.

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. Bidders not complying with **any** of the key Technical Schedule specifications shall be **Non-Responsive** while those meeting all the key technical specifications shall be **Responsive (evaluation committee may add more key requirements from the bid technical specifications.**

The tenderer shall also fill in the Technical Schedule as Specified in the tender document for Equipment"s and items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/ Equipment they propose to supply.

The tenderers who do not satisfy any of the above mandatory requirements shall be considered Non-Responsive and their tenders will not be evaluated further.

STAGE 2 TECHNICAL EVALUATION

A) Assessment for eligibility

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

TABLE 1: Assessment for Eligibility

Item	Description	YES/NO
1.	**Compliance with Technical Specifications** *(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)*	
2.	**Qualification and Experience of Key Personnel**	
	Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates) **a) Director of the firm** • Holder of at least a diploma with 10 years" experience in a relevant field	
	b) Project Manager/ Site Agent • Holder of at least a degree with 5 years" experience in a relevant field	
	c) At least 3 No artisans • Holder of at least a certificate with 5 years" experience in relevant Engineering field	
3.	**Experience of the firm in similar services: (*Air Conditioning Works, Fire Suppression and Mechanical Ventilation*)** a) Provide Three (3No.) projects of similar nature, complexity or magnitude) between the Period 2019 – 2023: **(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)**	
4.	**Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)** The tenderer ***must*** show proof of ownership or leasing of the following equipment: - a) **Relevant Transport (at least 1No.)** • Means of transport b) **Relevant Equipment (at least 3No.)** • Has relevant equipment for work being tendered	
	QUALIFIED YES / NO	

Noncompliance with the Technical Evaluation will render the Tenderer Non responsive and therefore unqualified for further evaluation:

PART II - WORKS REQUIREMENTS

B. GENERAL MECHANICAL SPECIFICATIONS

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 minimize 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 weeks" 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.

2.08.5 Shop drawings

Before manufacture or Fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

2.09 **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.

C: PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

GENERAL

SCOPE OF WORKS

The works to be carried out under this sub-contract comprise Supply, installation, testing and commissioning of the following: -

a) **Air-Conditioning, Fire Suppression and Mechanical VentilationInstallation works**

BROCHURES FOR DEVICES

For consideration and qualification tenderers shall, at their own cost, provide colored manufacturer"s brochures detailing technical literature and specifications where applicable

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

3.2MATERIALS AND STANDARDS

3.2.1 Pipework and Fittings

Pipework materials are to be used as follows:

i. **Galvanized Steel Pipework**

Galvanized steel pipe works 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.

ii. **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.

iii. CPVC piping

PVC (polyvinyl chloride) that has been chlorinated via a free radical chlorination reaction. CPVC is produced by adding chlorine to PVC in a water slurry or fluidized bed chlorination process. The chlorination reaction is initiated by ultraviolet light. The chlorinated PVC is compounded with ingredients necessary for the desired properties for further processing. The chlorine added to PVC gives CPVC higher temperature performance and

improved fire and corrosion resistance.

Should conform to ASTM D2846 standard and ASTM F441 Standard for chlorinated poly vinyl chloride pipes.

Short copper connection tubes between galvanized pipe work and sanitary fitments 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.

b) **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.

c) **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.

ii. 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-meter centers.

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.

iii. **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.

iv. **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**

v. 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.

vi. 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 Littleshampton, 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 builder"s 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.

vii. 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 meters for steel and copper pipe and tube is given in the following table for horizontal runs.

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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.

viii. 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. They shall be as described in the bill of quantities.

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.

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 galvanized 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 ten hours 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.

ix. 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:

- Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- 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 sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization 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.

D: PARTICULAR SPECIFICATIONS FOR AIR-CONDITIONING

3.1 **SCOPE OF WORKS**

The works shall comprise of the supply, delivery and installation, setting to work, testing and commissioning of all the materials and equipment called for in this specification. The works shall include split air-conditioning and toilet mechanical extract installations.

The amount quoted shall include for all materials and items not particularly called for in this specification but which are necessary for the completion and satisfactory functioning of the works.

3.2 **CLIMATIC CONDITIONS**

The following climatic conditions apply at the site and all the materials and equipment used shall be suitable for these conditions:

Maximum Design Temperature	-
Minimum Temperature	-
Average Diurnal Range	-
Relative Humidity	-
Altitude	-
Longitude	-
Latitude	-

3.3 **AIR-CONDITIONING INSTALLATION**

3.3.1 Split Air-conditioning System

The split air-conditioning system shall be designed to maintain room inside temperature of 23±1° C and relative humidity of 50±10%.

The air-conditioning system shall comprise of indoor units which include, ceiling mounted fan-coil cooling unit, Floor standing unit, High wall unit and ceiling cassette unit. Each system will have its outdoor condensing unit. Each system shall be complete with the following:

- 1 No. evaporator unit
- Direct expansion cooling coil with copper tubes and aluminium fins
- Refrigeration pipework
- Distributor with refrigeration control
- Refrigerant (R410A) charge
- 1 No. air-cooled condensing unit
- Fixing brackets
- Thermostat to control room temperature
- High- and low-pressure units
- Condensate discharge pipework
- Service access valves

The system shall be suitable for 240V, 1 – Phase, 50Hz power supply

3.3.3 Refrigeration Pipework.

Pipework shall be approved copper tubing and fitting and shall be properly fixed in conformity with „Samsung technical installation Manual" or any other manufacturer printed installation instructions. The refrigerant lines shall be insulated with at least 25mm thickness of Armaflex or other approved material, which shall not have insulating properties inferior to those of cork. The condensing unit shall be approximately 3 meters from evaporator unit.

3.3.2 Variable Refrigerant Flow (VRF) Air-conditioning System

The split air-conditioning system shall be designed to maintain room inside temperature of 23±1° C and relative humidity of 50±10%.
The air-conditioning system shall comprise of indoor units connected to a common outdoor unit
Each system shall be complete with the following:

- evaporator units
- Direct expansion cooling coil with copper tubes and Aluminium fins
- Refrigeration pipework
- Distributor with refrigeration control
- Refrigerant (R410A) charge
- air-cooled condensing unit
- Fixing brackets
- Thermostat to control room temperature
- High- and low-pressure units
- Condensate discharge pipework
- Service access valves

The system shall be suitable for 415V, 3 – Phase, 50Hz power supply

3.3.3 Refrigeration Pipework.

Pipework shall be approved copper tubing and fitting and shall be properly fixed in conformity with „Samsung VRF technical installation Manual" or any other manufacturer printed installation instructions.

The refrigerant lines shall be insulated with at least 25mm thickness of Armaflex or other approved material, which shall not have insulating properties inferior to those of cork.

E: PARTICULAR SPECIFICATIONS FOR FIRE SUPPRESSION SYSTEM

GENERAL SPECIFICATIONS FOR FIRE SUPPRESSION SYSTEM

1.1 General

The specifications described here make reference to FM 200 fire suppression system. However, alternative systems utilizing inert gases may be used subject to the condition that they meet all the requirements of this specification.
The FM 200 shall be used to extinguish fires in the rooms to be specified.
The gas shall be stored under pressure in liquefied form inside cylinders and piped to fire protected areas. Each FM 200 system in a given zone shall be supplied complete with its control Unit that shall receive the signal from smoke detectors or break glass and automatically release the gas after sounding an alarm bell and switching off any existing Ventilation systems. The fire detection system in all areas where FM 200 gas system is not installed shall be supplied and installed by, but the Sub-Contractor shall liaise with him and extend detection signal outputs into the Master Alarm Control Panel.

The Design, equipment, installation, testing and maintenance of the system shall be made in accordance with these specifications, drawings and the following standards:

a) **NFPA 2001-Clean Agent Fire Extinguishing systems**
b) **NFPA 70-National Electrical Code**
c) **NFPA 72-National Fire Alarm Code**
d) **Local authority requirements**

The fire suppression systems shall be designed by competent personnel who are trained and authorized by the equipment manufacturer for design of total flooding FM 200 systems and the integrated detection systems. Working Drawings shall be provided in sufficient detail to indicate the type, size, and arrangement of component materials and devices; and the dimensions needed for installations and correlation with other materials and equipment. All Working Drawings shall be submitted for review and approval prior to installation.

Detailed literature outlining the operation, recharge and service of the system, Maintenance procedures for the owner shall be provided.

Equipment manufacturer shall provide a **12-month** warranty Details of this warranty shall be furnished upon request.

All devices, components and equipment shall be products of the same manufacturer and shall be U.L listed or FM approved.

1.1 SYSTEM ARRANGEMENT

FM 200 fire suppression system shall be of the engineered, permanently piped, fixed nozzle type with all pertinent components of the same manufacturer. All agent storage containers shall be centrally located as vertical, free-standing cylinders with wall mounted retaining brackets. Where multiple cylinders are required for the same hazard, a common manifold should be employed.

Manifolds shall be constructed from seamless schedule 80 piping. They shall be complete with a safety relief valve. Manifolded cylinders shall employ a flexible discharge hose to facilitate installation and system maintenance. Each cylinder on a manifold shall also include an agent check valve installed to the manifold inlet.
Where a set of manifolded cylinders shall be required to serve multiple zones, selector valves shall be used to direct the extinguishing agent to the respective zone.

Detection system shall be of the engineered type, suitable for direct interface with the FM 200 fire suppression system. Detectors shall be wired in Sequential Detection method of operation or standard Cross-Zoned detection. For each hazard, both Ionization and Photoelectric type smoke detectors shall be used to provide automatic input to the control panel.
In addition, manual pull station(s) shall be provided for the direct electric release of the FM 200 Fire Suppression System.

Automatic operation of each protected area shall be as follows:

a) Actuation of one (1) detector, within the system to:

i) Illuminate the "ALARM" LED on the control panel face.
ii) Energize the audible notification appliances within the protected space with a Unique pattern to indicate a first alarm condition

i) Transfer sets of 5 Amp rated auxiliary contacts which can perform auxiliary system functions such as: Operate door holder/closures on access doors, Transmit a signal to the fire alarm system, Shutdown HVAC equipment, etc
ii) Light an individual LED on an optional graphic annunciator.

b) Actuation of a 2nd detector, within the system, to:

i) Illuminate the "PRE-DISCHARGE" LED on the control panel face; energize the audible notification appliances within the protected space with a unique pattern to indicate a second alarm (predischarge) condition, Shut down the HVAC system and/or close dampers, Start time-delay sequence (not to exceed 60 seconds), enable System abort sequence, Light an individual LED on a graphic annunciator.

ii) After completion of the time-delay sequence, the system shall activate and the following shall occur: Illuminate a "RELEASE" LED on the control panel face, Energize the audible notification appliances within the protected space with a continuous on pattern to indicate a release condition, Shutdown of all power to high-voltage equipment, Energize a visual indicator(s) outside the hazard in which the discharge occurred, Energize a "System Fired" audible device.

The system shall be capable of being actuated by manual discharge devices located at each hazard exit. Operation of a manual device shall duplicate the sequence description above except that the time delays and abort functions SHALL be bypassed. The manual discharge station shall be of the electrical actuation type and shall be supervised at the main control panel.

1.2 DESIGN PARAMETERS – FM 200

Design of the total flooding FM 200 system shall be based upon the enclosure being sufficiently tight against agent leakage with all ventilation shut down and or fire dampered or provide for static air condition upon discharge.
Agent quantity calculations shall be determined from dimensions furnished on the construction drawings and or in the particular specification using a design concentration based on fire hazard class of the protected zone and the NFPA 2001 standards. As a minimum a concentration of 38% at the minimum anticipated hazard temperature of 20 ^{0} C shall be used.
Calculation for the maximum design concentration shall be based upon maximum anticipated hazard temperature of 32 ^{0} C. When applicable, agent quantity shall be adjusted for:

i) Altitudes of more than (915m) above sea level.

ii) Non-flooded false ceiling volume.
iii) Multiple hazards from a common agent supply.
iv) Manufacturer standard tanks and fill increments
v) Duct volume for HVAC system.

The system shall be designed to discharge the calculated agent quantity in a nominal 60 second period.Nozzle spacing shall be in accordance with the listed approved coverage for each nozzle type. In all cases, the need for additional nozzle shall be considered based upon site conditions and manufacturer"s recommendations.

Hydraulic calculations for each system shall be used upon two-phase flow equations for unbalanced systems as defined by **NFPA** regardless if a single nozzle or balanced piping network is used.Computerized verification of hydraulic calculations shall be submitted for each FM 200 system.
The contractor shall provide data to indicate the free venting area required per **NFPA standards** for each hazard volume.

1.2.1 DESIGN PARAMETERS – DETECTION

The design of the detection/control system shall be based on a clean, vibration free, electrical non-hazardous environment
As a minimum detector spacing shall be based upon **NFPA** recommended practices for ceiling construction, air flow and manufacturer recommendations.
At least one smoke detector of each type (ionization and photoelectric) shall be used in each protected area. Where multiple detectors are used, detection shall alternate such that ionization are adjacent to photoelectric. Unless otherwise stated on the drawings manual pull station(s) shall be located at all points of exit from the protected area.
Unless otherwise stated on the drawings at least one alarm device shall be located within the protected area for the general alarm function.
Battery capacity shall be sufficient to permit normal non-alarm condition for 24 hours with subsequent general alarm for 5 minutes after loss of primary line power. The contractor shall be required to furnish calculations to back up the battery capacity to be installed.

1.3 EQUIPMENT AND MATERIAL

1.3.1 General

All materials and equipment shall be of new, unused, and undamaged condition in strict accordance with the requirement of this section. Equipment shall be required to meet the specified standards; **ISO 14520, NFPA.**
All equipment"s and materials shall only be used for their intended application, in locations for which they were designed, and installed in accordance with the manufacturer"s instructions and or recognized standard trade practice.

1.3.2 Pipe Material – FM 200 200 bar System.

FM 200 200 bar system piping shall be of non –combustible materials having physical and chemical characteristics such that its integrity under stress can be predicted with reliability. Materials other than listed below , such as stainless steel or nonferrous piping or tubing , may be used if the materials satisfy the applicable requirements of NFPA.
As a minimum, piping materials and manifolds shall be schedule 40 seamless steel pipes conforming To BS specifications and capable of 65 bar operating pressure (ASTM Grade A-106B). Under no conditions shall ordinary cast iron pipe, steel pipe or non- metallic pipe be

used.FM 200 system piping joints shall be suitable for the design conditions and shall be selected with consideration of joint tightness and mechanical strength.
As a minimum, fittings shall be black class 300 malleable iron fittings. Ordinary cast iron fittings shall not be permitted.
Piping shall be installed accordance with good commercial practice to the appropriate codes, securely supported with Listed hangers, and arranged with close attention to the design layout since deviations may alter the design flow performance as hydraulically calculated.

All Piping must be reamed, blown clear, and swabbed with appropriate solvent to remove mill varnish and cutting oils before assembly. The piping shall also be finished off with two coats of red paint after testing. Multi- outlet fittings other than tees shall not be permitted.
Assembly of all joints shall conform to the appropriate standards. Threaded pipe joints shall utilize Teflon tape applied to male thread s only.

1.3.3 Agent Storage Tank

FM 200 agent storage containers shall be of welded steel construction in accordance with **NFPA** Specification and finished in (baked red enamel) (red epoxy) paint.
Tank assemblies shall be filled with FM 200 pressurized to 200 bar at (15 ^{0}C). Initial filling of the cylinders and recharge shall be done in accordance with the manufacturer‟s established procedures and shall not require replacements components for normal service.
The size and fill weights of all cylinders shall be of the following nominal sizes: _

i) 31KG
ii) Any other storage capacity as specified by the manufacturer

Nominal 270kg tank assembly shall be equipped with an internal liquid level measuring rod, marked in ¼ inch increments to allow direct reading of the liquid level and conversation to the weight of Argon within the tank.

Tank assembles shall be vertical, free standing modules employing suitable wall mounted retaining brackets. Tank assemblies shall be listed or approved to perform in the temperature range -20C to 50C.
Aluminum name **plates** indicating manufacturer‟s name and part number, agent fill weight, total charged weight date of fill, shall be permanently bonded to each tank.
Each tank assembly shall have the means to accommodate lifting devices to facilitate weighing removal and replacing.
Tank assembly shall include a pressure gauge and a low pressure switch that operates at approximately 180 bar to facilitate continuous supervision of tank pressure.

1.3.3.1 Tank Valve

Agent storage tank assemblies shall include an integral, high flow valve assembly connected to the tank by a machined thread and sealed by an 0-ring.
Valve outlet sizes shall be based on the nominal tank capacity with a one-inch size for 18,33-,54-and 72-pound assemblies, and three inch for 600-pound assemblies.
The valve design shall be of the differential pressure type which utilizes tank pressure to seal the valve assembly. The valve shall be compatible with separate, removable, stackable type actuators for electric, pneumatic, and or manual actuation.
Operation of the valve by the stackable type actuator shall be such actuation. Operation of the valve by the stackable type actuator shall be such that pressure is relieved from the upper chamber of the valve causing the valve to open. Valves shall be forged brass construction with an o-ring sealed brass spool incorporating the main electrometric seal surface.

The valve assembly shall include recessed pressure gauge 0 to 250 bar, overpressure safety relief disc assembly, normally pressurized connection port for an optional low-pressure switch, normally unpressurized connection port used as pneumatic source for a slave cylinder valve actuation, and brass shipping caps on exposed thread connection.
When pneumatically operated main/reserve systems are used, pilot valves shall be equipped with actuation isolators. All tank valves shall be F.M or LPCB Approved.

1.4.3.2 Tanks Brackets

Each FM 200 tank shall be furnished with a stainless steel, two part, strap type retaining bracket designed to secure the cylinders to the wall or any other suitable surface as may be recommended by the system manufacturer.

1.4.3.3 Valve Actuator system

FM 200 valve actuator system shall consist of a pneumatically operated cylinder actuator assembly and and a **solenoid type** Electric actuator package.
The solenoid actuator package shall consist of the solenoid valve mounted either on a rechargeable slave nitrogen cylinder or on the Argon gas cylinder. A signal from the control panel shall operate the solenoid valve to discharge the gas in the pilot cylinder. The discharged gas shall then open the cylinder actuator assembly mounted on the FM 200 cylinder discharge valve. This process shall release the stored FM 200 gas for fire extinguishing.
Where multiple zones are protected from the same storage system, selector valves shall be used. These valves shall be actuated by the Nitrogen gas from the actuation package.
Manual override actuators shall be designed to attach to electric actuator or directly to the valve assembly and permit manual operation of the pilot cylinder tank assembly. Manual actuator positions shall be clearly marked and operating instructions provided. All actuators shall be LPCB Approved.

1.4.3.4 Discharge Nozzles

FM 200 discharge nozzles shall be of one piece (brass) construction sized to provide flow rates in accordance with system design hydraulics.Orifice (s) shall be machined in the nozzle body to provide a horizontal discharge in 90^0, 180^0, or 360^0 patterns based upon the approved coverage arrangements. Separate, interchangeable orifice plates are not acceptable.
Nozzles shall be permanently marked with the manufacturer"s part number, number of orifice and orifice code. The nozzle shall be threaded directly to the discharge piping without the use of special adaptors.Nozzles shall be LPCB Approved.

1.4 Warning Signs

Etched aluminum Warning Signs shall be provided at all Entrance and Exits of the protected area. Entrance sign shall read: "WARNING DO NOT ENTER ROOM WHEN ALARM SOUNDS, **FM 200** BEING RELEASED."
Exit sign shall read: "WHEN ALARM SOUNDS, VACATE AT ONCE, **FM 200** BEING RELEASED."

1.5 EQUIPEMENT AND MATERIAL –ELECTRICAL

1.6.1 General Materials

All electrical trunkings and conduits shall be employed in accordance with applicable codes and intended use and contain only those electrical circuits associated with the fire detection and control system and shall not contain any circuit that is unrelated to the system.
Unless specifically provided otherwise in each case, all conductors shall be enclosed in steel conduit, rigid or thin walled as conditions dictate, except in computer room where they shall be

PVC conduit concealed in building fabrics.
All wiring shall be of the proper size to conduct the circuit current The use of aluminium wire is strictly prohibited. Splicing of circuits shall be kept to a minimum and are only to be found in an electrical device suited for the purpose. Wire spliced together shall have the same colour insulation. Wire splices shall be made with appropriate devices suited for the purposes. All wire terminations shall be made with crimp terminals unless the device at the termination is designed for bare wire termination.
All electrical circuits shall be numerically tagged with suitable devices at its terminating point and/ or splice. All circuits numbers shall correspond with the installation drawings.

The use of coloured wires is encouraged. White coloured wire shall be used exclusively for the identification of the neutral conductor of an alternating current circuit.

Green coloured wire shall be used exclusively for the identification of the earth ground conductor of an AC and DC circuit.

1.6.2 Control Panels – General

All control panels shall be F.M Approved and be utilized with listed or approved operating devices and shall be capable of the following features,:

a. Supervised Detection Circuits (s) with a first stage and a second stage circuit.
b. Supervised Alarm Circuit allowing for a first stage alarm, second stage alarm and the third stage for gas release.
c. Supervised Release Circuit
d. Supervised Manual Electric Pull Circuit
e. Supervised Manual mechanical Pull Circuit
f. 0-60 second Programmable Time Delay
g. Battery Standby
h. Front Panel Indicating Lamps and 4x20 character display
i. Key Lock Steel Enclosure with a glass panel covering the controls

The internal power supply shall operate from 240V 50Hz A.C power supply. A fused polarity reversing , 1 amp, 24VDC supervised dedicated release circuit for use with approved fire suppression system releasing devices shall be provided.

The control unit shall provide provisions for housing its own set of "on-line" float charged emergency batteries within the enclosure.; Battery supervision shall be provided for condition and placement of the batteries.

A supervised dedicated manual pull circuit designated for immediate operation of the release circuit shall be provided. An auxiliary trouble circuit for supervision of other normally closed accessory devices shall be provided. The control unit shall be housed in steel cabinet of approved type with conduit knockouts in a (red) (beige) enamel finish.
The control unit shall be F.M or LPCB Approved as an alarm releasing control unit

1.6.3 Smoke Detector - Ionization

Ionization type smoke detector shall be dual chamber type and compatible with the control unit. The detector shall have an LED in its base which is illuminated in a steady "on" mode when in alarm. Reset of the detector shall be performed by the control unit reset switch.
The design of the ionization detector compensating circuits shall provide stable operation with

regard to minor changes in temperature, humidity, and atmosphere conditions.
The sensitivity voltage shall be factory ser per U.L 268. A special locking screw shall be provided to lock the head to the base; the head to base connection shall be by use of bifurcated contracts. Terminal connections to the base shall be of the screw type. The detector shall be F.M or LPCB Approved.

1.6.4 Smoke Detector - Photoelectric

Photoelectric detector shall be a solid-state sensing chamber unit providing stable operations (sensitivity) and compatible with the control unit. The detector shall utilize a light sensing photodiode and a pulse signal processor to measure the density of the combustion products within The sensing chamber - The detector head shall have a stainless steel mesh to prevent foreign objects from entering the sensing chamber. The sensitivity voltage shall be factory set. A special locking screw shall be provided to lock the head to the base. The head to base connection shall be by use of bifurcated contacts. Terminal connections to the base shall be of the screw type. The detector shall be F.M or LPCB Approved.

1.6.5 Alarm Bells

The vibrating Alarm Bell shall be approved for use with the listed control unit. The polarized alarm bell shall be rated at 24VDC and draw no more than .063 amps and shall contain a series diode for use in supervised systems. It shall also incorporate a flashing strobe light. It shall have a dB level of 86 – 90 at 3 metres.

The bell shall be constructed of high quality materials to ensure reliability and long life and have a baked red enamel finish. The device shall be F.M or LPCB Approved.

1.6.6 Manual Pull Stations (Fire man's switch)

The Manual Pull Station shall be provided for the release (electrical) of the FM 200 in case of an emergency. The unit shall be contained within a metal body having a (single) (double) pole switch. The device shall be F.M or LPCB Approved.

1.6.7 Abort Switch

The abort switch shall be used where an investigation delay is desired between detection and actuation of the FM 200 System.
The Abort Station shall be the "Dead Man" type and shall be located next to each manual. Switch. "Locking" or "Keyed" abort stations **shall not** be permitted. The Abort Station shall indicate a trouble condition at the Control Panel, if depressed, and no alarm condition exists. The Abort Station shall be located adjacent to each manual station and can be furnished in combination with a Manual Release Switch.
The device shall be U.L listed or F.M Approved for a delay switch.

1.6.8 Pressure Switch

This pneumatically actuated switch shall be used to give positive identification of release of FM 200 in the piping system.
The switch shall have one set of normally open and one set of normally closed contacts.

1.7 SYSTEM INSPECTION AND TESTING

The completed installation shall be inspected by authorized personnel and shall include a full operational test of all components per the equipments manufacturer recommendation including agent discharge.This shall be done in the presence of the owner"s representative and other insuring authority having jurisdiction.All mechanical and electrical components shall be tested according to the manufacturer"s recommended procedure to verify system integrity.

The inspection and testing shall be carried out by the contractor. The tests shall demonstrate that the entire control system functions as designed and intended. All circuits shall be tested: automatic actuation, solenoid and manual actuation, HVAC and power shutdowns, audible and visual alarm devices and manual override of abort functions. Supervision of all panel circuits, including AC power and battery power supplies, shall be tested and qualified. Inspection shall include a complete checkout of and certification of weight and cylinder pressure. A written report shall be filed with the Engineer.

Two copies of drawings shall be provided by Contractor indicating the installed details. All routing or piping and electrical conduit and accessories shall be noted.
Equipment, Installation and Maintenance Manuals shall be provided in FOUR copies, in addition to the as-built drawings.

Prior to final acceptance, the contractor shall provide operational training in all concepts of this system to the owner‟s key personnel. Training shall consist of:-

i) System Control Unit Operation
ii) Troubleshooting Procedures
iii) Abort Procedures
iv) Emergency Procedures
v) Safety Requirements
vi) A functional test shall be completed prior to the concentration test consisting of detection, release alarm, accessories related to system, control unit, and a review of the tanks, piping, fittings, hangers and cylinder pressure.

1.8 WARRANTY
All system components shall be guaranteed against defects in design, materials and workmanship for the full warranty period which shall in no case be less than one (1) year from the date of system acceptance.

F: GENERAL SPECIFICATION FOR MECHANICAL VENTILATION INSTALLATIONS

SECTION D:

GENERAL SPECIFICATION FOR MECHANICAL VENTILATION INSTALLATIONS

x. SCOPE OF WORK

The scope of the works comprises Installation, Testing, and Commissioning of Mechanical Ventilation and Air Conditioning systems in accordance with Specifications and drawings.

All the necessary elements and details for complete system are to be included.
Excluded from the specifications are the following: -

- All concrete works
- All block works
- Electrical wiring, isolators and switch boards, except internal wiring for control system from a local isolator.

xi. SYSTEM COMPONENTS

Dimensions and capacities of ducts and fans are calculated and based on a specific requirement of air, and on an assumed resistance through grilles, silencers etc. However, the installer shall be responsible for the correct functioning of the system. Subsequently it is therefore his duty to size the systems" components with consideration to his offered equipment.

3.0 DRAWINGS

The Engineer "s drawings show the main layout and principles for the Ventilation and Air Conditioning Systems. If need for further detailing is required in order to carry out the work, working drawings and details shall be produced for approval by the Engineer before the work is executed.

In preparation of the working drawings are care should be taken to coordinate the Ventilation and Air Conditioning works with other services involved and avoid any interference with these.

4.0 MATERIALS AND WORKMANSHIP GENERALLY

In the specification, equipment is generally described according to capacities and a given standard in order to aid in identification of the particular equipment to satisfy specifications. The equipment selected shall be of reputable manufacture with adequate Back-Up service.

If the Engineer finds it necessary, samples of the materials will be submitted for approval before placing an order. The Engineer shall reject any materials which he finds to be of unsatisfactory quality.

Works shall be carried out by competent workmen under experienced supervision. The Engineer shall have the authority to have any substandard work or equipment redone and/ or equipment replaced.

5.0 DUCTWORK GENERALL

5.1 Ductwork

All seams, joints and connections to plant shall be so made as to reduced air leakage to a minimum. Internal roughness and obstructions to airflow will not be accepted. Sharp edges or corners on the outside of ductwork, flanges, supports, etc will not be accepted. Any part of galvanized ductwork where the galvanizing is damaged during manufacture or erection shall be painted with two coats of aluminum, zinc or other corrosion – resisting paint to the approval of the Engineer.

Where ducts pass through roofs (and external walls where applicable) these shall be fitted with angle flanges and weather cravats to ensure a weather-proof fitting to the building structure.

Connections to equipment shall be made with angle flanged joints. Ductwork which may have to be moved to enable plant to be removed shall incorporate angle flanged joints. For long duct runs, angle flanged joints shall be included at intervals to facilitate any subsequent alternations.

Bends and offsets shall have a minimum throat radius equal to the width of the duct. Where short radius elbows are indicated or agreed by the Engineer as necessary due to site limitations the dimensions and internal vane (s) shall be in accordance with HVCA publication DW/121.

Ductwork shall be constructed by galvanized, cold rolled, close annealed patent flattened sheets. Tests holes shall be provided in branch ducts from grilles and there shall be three or four tests holes on side of duct according to duct depth at each test position. At branch positions there shall be one test hole. Air tight swivel type metal covers shall be fitted over the test holes in such a manner that they shall be readily removed as required.

5.2 Rectangular ductwork

Construction of ductwork shall be as per the following Guidelines:

- Up to 300mm longer side – 22 S.W.G.
- over 300mm and up to 460mm longer size – 20 S.W.G.
- over 460mm and up to 900mm longer side 18 S.W.G (stiffening to be 25mm x 25mm x 3mm. M.S angle at slip joints at 180mm spacing)
- Over 900mm and up to 1370mm. longer side 16 S.W.G. (stiffening to be 30mm x 30mm x 3mm M.S angle at 900mm spacing).
- Over 1370mm longer side – 14 S.W.G. (Stiffening to be 40mm x 40mm x 5mm M.S angle at 900mm. spacing).

Ductwork constructed from 22 and 20 S.W.G sheet shall have folded locked seams and ductwork constructed from 18, 16 and 14 S.W.G. sheets shall have riveted seam with 8 S.W.G rivets at 2" pitch.

Joints for ductwork having a side greater in width than 610mm shall be flanged by means of 30mm x 30mm x 3mm mild steel angles. Mild steel used as flanges or stiffeners shall be riveted to the ductwork, with 8 S.W.G rivets at 2" pitch. The joint faces of flanges shall be drilled for 10mm bolts at 75mm pitch. Air tight access doors shall be provided on the ductwork wherever indicated on the drawings. The access doors, of sufficiently heavy construction to avoid distortion, complete with handles, shall be secured by brass wing nuts screwed into studs provided, on galvanized mild steel stiffening frames riveted, or bolted to the ductwork. The access doors shall be provided with felt or rubber gaskets to ensure that when closed they are perfectly tight.

The ductwork shall be installed with all joints air tight and adequately stiffened and braced shall have the largest radius possible with a minimum throat radius of one diameter if possible. Square or miter elbows will only be allowed where shown on the drawings. Turning vanes shall be fitted in square or miter elbows. Transformer pieces except where situated on fan suction shall be constructed so that the angle on any side does not exceed 15° to the axis of the duct where possible.

Branch ducts shall enter main ducts expansion sections where possible. Where branch ducts occur, at taper or transformation pieces, the length of such pieces in the main duct shall be symmetrical about the axis of the branch.

6. BRACKETS AND SUPPORTS

Supports and brackets for ductworks shall be made adjustable for height, spaced to ensure support and where practicable shall be fitted at each joint of the ductwork. Vertical ductwork shall be supported at each floor level, horizontal ducts at intervals not exceeding 2280mm and adjacent to fans, canvas joints and other equipment. All members of supports in contact with metal ductwork shall be galvanized after fabrication.
Socketed joints shall have a minimum overlap of 50mm in the direction of flow. The joint shall be made with an approved type jointing compound with bolts or rivets at centers not exceeding 50mm. wherever access cannot be made for riveting or bolting self-tapping screw of the shortest length which will give a satisfactory joint shall be used in lieu of the rivets or bolts, on size or diameters up to 530mm. All slip joints on circular ductwork are to have a spigot carefully swaged damper leaves shall be multi leaf type. The quadrants shall be of robust construction and securely fixed to the ductwork. The leaves shall be linked with a connecting rod and the ends of the spindle shall be housed in bearings. Dampers are to indicate the full and closed positions and are to be marked and then locked after air Volume has been set.

7.0 JOINTS

7.1 Flexible Joints

Flexible joints shall be provided on fan inlet and outlet connections and elsewhere on the ductwork where indicated. They shall be over the full cross- sectional area of the mating fan inlet or outlet section. The ends of the duct and fan connections shall be in line.

Flexible joints shall consist of, or be protected by, material having a fire penetrating time of at least fifteen minutes when tested in accordance with BS 476 Part 1 Section 3. The material shall be of the glass fibre cloth type, canvas or other approved material. The width of joints from metal edge to metal edge shall not be less than 80mm and more than 250mm.

All flexible joints other than fan inlet connections shall be between flanged ends. The flexible material flange shall be backed by an angle or flat iron flange and the flexible joint flat iron bar used with fan inlets shall not be less than 5mm thick.

7.2 Flexible Connections.

Where flexible connections are indicated or required between rigid ductwork and particular components or items of equipment, the internal diameter of the flexible duct shall be equal to the external diameter of the rigid ductwork and of the spigot type. The use of flexible duct between rigid sections of sheet metal ductwork to change direction or plane will not be permitted except where indicated or expressly authorized by the Engineer.

The flexible duct shall have a liner a cover of tough tea-resistant fabric equal in durability and flexibility to glass fibre shall be impregnated and coated with plastics. It shall be reinforced with a bonded galvanized spring steel wire helix or glass fibre cord or equal and shall be bonded to cover to ensure regular convolutions.

Alternatively, the flexible duct shall consist of flexible corrugated metal tubing of stainless steel, aluminium, tinplated steel or aluminium coated steel. The metal may be lined on the inside or the outside or both with plastics materials.

The joints to rigid spigots shall be sealed with a brush coat of pipe jointing paste or mastic compound. Ducts up to 150mm diameter shall be secured with a worm drive type hose clip complying with BS 3628. Ducts over 150mm diameter shall be secured with band clip.

The frictional resistance to air flow per unit length of the flexible duct shall not exceed 50% more than the frictional resistance per unit length of galvanized steel ducts of equivalent diameter. The radius ratio R/D for bends shall not be less than 2, where R is the centre line radius and D is the diameter of the flexible duct.

Flexible ducts shall be suitable for an operating temperature range of 18oC to 120oC and shall comply with BS 476 Part 1, Section 2, Clause 7 (Clause 1; surface of very low flame spread).

8.0 FINISH PAINTING

Upon completion of the installation and after all tests have been carried out to the satisfactory of the Engineer, the plant, equipment, supports, etc. shall be examined and all priming coats damaged during erection made good. Any plant or equipment, ductwork, etc., which is to be insulated, shall have had the priming paint protection made good before the application of the insulation. After the above procedures have been carried out to the satisfaction of the Project Manager, the various surface shall be given the necessary preparation as recommended by the paint and insulation manufacturers and finish painted in colours to be agreed between the Sub-Contractor and Project Manager, at a later date.For the purposed of the Specification, however, it shall be deemed that the sub-contractor"s tender price was based on the identification requirements for the various services detailed in Code of Practice DW/161 Identification of Ductwork as published by the H.V.A.

9.0 AIR INTAKES AND OUTLETS

Unless otherwise indicated fixed louvers on external walls will be fitted at air intake and outlet positions. A galvanized steel wire mesh screen of 20mm diamond mesh and at 2mm diameter

wire and complete with a frame of galvanized steel rod with securing lugs or of flat iron shall also be fitted on the inner side of the louvers.

10.0 FANS

10.1 General

Fans shall capable of giving the specified performance when tested in accordance with BS 848. Although estimated values of the resistance to airflow of items of equipment may be indicated, this does not relieve the Contractor to the responsibility for providing fans capable of delivering the required air volume flow through the system.

The make and design of fans shall be approved by the Engineer and evidence supporting noise levels and fan efficiencies shall be provided. Where fans are supplied with noise attenuations, full details of the attenuations shall be given.

Belt driven fans shall be fitted with pulleys suitable for V-belts; pulleys of the taper lock type may be used for drivers up to 30KW output. Alternatively, and in any case above 30KW output, pulleys shall be secured to the fan and the motor shafts by keys fitted into machined keyways. Pulleys shall be keyed to the fan shaft in the overhung position. Keys shall be easily accessible so that they can be withdrawn or tightened and they shall be accurately fitted so that the gib head does not protrude beyond the end of the shaft.

Machined bolts, nuts and washers only shall be used for the assembly of fans; all bearing surfaces for the heads of bolts or washers shall be count faced. Holding down bolts for fans and meters shall be square section under the head or be fitted with snugs to prevent them tuning in the fan base plate when the nuts are tightened.

Any fan which is too large or too heavy for safe manhandling shall provided with eyebolts or other lifting facilities to enable mechanical lifting equipment to be used.

10.2 Axial Flow Fans

Axial flow fans shall be of either the single stage type or the multi-stage contra-rotating type with each impeller mounted on an independent motor. Casings shall be rigidly constructed of mild steel stiffened and braced to obviate drumming and vibration. Cast iron of fabricated steel feet shall be provided where necessary for bolting to the base or supports. Inlet and outlet ducts shall terminate in flanged rings for easy removal. The length of the fan (s) and motors(s) shall also terminate in flanges in order that the complete section may be removed without disturbing adjacent ductwork. Electrical connections to the motor(s) shall be through an external terminal box secured to the casing. Impellers shall be of steel or aluminium, the blades shall be secured to the hub or the blades and the hub shall be formed in one piece. The hub shall be keyed to a substantial mild steel shaft and the whole statically balanced. Blades shall be of aerofoil section. Shafts shall be carried in two bearings which may be ball roller or sleeve type. Lubricators shall be extended to the outside of the casing.
Where axial flow fans are driven by a motor external to the casing the requirements for pulleys and for V-belt drives and guards shall be met. Unless otherwise indicated a guard is not required for any part of a drive which is within the fan casing. An access door of adequate size shall be provided.
Where axial flow fans of the bifurcated type are indicated the motors shall be out of the air stream. Motors may be placed between the two halves of the casing in the external air or may be

placed within the fan casing provided that effective ventilation is given to the motor. Where hot gases or vapours are beings handled the motor and the bearings shall be suitable for operation at the temperature they may experience.

11.0 DAMPERS

11.1 General

Sufficient dampers shall be provided to regulate and balance the system. Dampers on grills or diffusers shall be used for fine or secondary control. All dampers shall be sufficiently rigid to prevent fluttering. Unless otherwise indicated, the air leakage past dampers in the fully-closed position shall not exceed 5% of maximum design air flow in the duct. All duct dampers except fire dampers and self-closing flaps shall be fitted with locking devices and position indicators. Dampers shall be generally in accordance with the appropriate HVCA Specification.

Each Primary control damper shall be fitted with a non-corrodible label stating the Actual air flow in M3/S and the cross-sectional area. Alternatively, these figures shall be painted in a visible position on the adjoining ductwork or insulation. The position of a damper as set after final regulation and balancing be indelibly marked on the damper quadrant

11.2 Butterfly dampers

Butterfly dampers shall each consist of two plates" edge seamed, and of the same thickness of material as that from which the associated duct is made, and rigidly fixed to each side of a mild steel operating spindle, the ends of which shall be turned and housed in non-ferrous bearings.

11.3 Bifurcating dampers

Bifurcating dampers shall be of 2mm thick sheet for sizes up to 450mm square. For larger sizes, the thickness shall be as indicated. Damper plates shall be rigidly fixed to square section mild steel spindles the ends of which shall be turned and housed in non-ferrous bearings.

11.4 Multi-leaf dampers

Multi – leaf dampers shall consist of two plates of material of the same thickness as the associated duct and rigidly fixed to each side of an operating spindle, the ends of which shall be housed in brass, nylon, oil impregnated sintered metal, PTFE impregnated or ball bearings. The ends of the spindles shall be linked such that one movement of the operating handled shall move each leaf an equal amount. An inspection door shall be provided adjacent to each multi-leaf damper.
On low velocity systems only, multi -leaf damper blades may be of a single plate, at least 1.6mm thick and suitably stiffened, and the blade linkages may be within the duct. Those dampers shall have bearings and inspection doors as specified above.

11.5 Damper Quadrants and Operating Handles

Quadrants and Operating handles shall be of die -cast aluminium with the words" OPEN" and "SHUT" cast on the Quadrants. Quadrants shall be securely fixed to the damper spindles and shall be close-fitting in the quadrants hubs to prevent any damper movement when the damper levers are locked.

11.6 Self-closing dampers

Self-closing dampers shall be designed so as to present the minimum of resistance to airflow under running conditions, to take up a firm, non-fluctuating position under running conditions and to give a tight shut-off when closed. They shall incorporate rubber stops to prevent rattling and to give a tight shut-off when closed. They shall incorporate rubber stops to prevent rattling.

11.7 Sliding Dampers

Sliding dampers shall be provided only where indicated. They shall be of 2mm. thick sheet steel for size up to 450mm square. For larger sizes the thickness shall be as indicated. They shall run in guides lined with felt.

11.8 Iris type dampers.

Iris type dampers may be used in ducting up to 600mm, dia. Or 450mm square. The control shall be on the outside of the damper. The design shall be such that the leaves of the damper can be easily moved for adjustment.

12.0 GRILLES

12.1 Supply & Return Registers

Supply registers shall be manufactured from high grade, extruded Aluminium sections with lacquered finish and fixing shall be 32mm with bevelled edges.
The registers shall have a front set of blades parallel to the long dimension, of rear set of blades parallel to the short dimension, the blades being at 17mm centres and individually adjustable with opposed blade dampers.

12.2 Extract grilles

Extract grilles shall be similar to the Supply Registers described above with the exception that they have only one set of blades parallel to the long dimension.

12.3 Fresh Air Grilles

These shall be manufactured from sheet steel with steel fixing flanges and shall be galvanized after manufacture. An insect screen shall be fixed downstream.

12.4 Diffusers

These shall be manufactured from high grade extruded sections with lacquered finish, bevelled flanges and removable core. Fixing shall be by self-tapping screws through the duct into neck of the diffuser.

12.5 Louvres

Discharge and Fresh air Intake louvres shall be manufactured from mild steel and be galvanized after manufacture. A screen shall be fixed to the back of the louvres

13.0 ATTENUATORS

13.1 General

Purpose made attenuators and sound absorbing material shall be designed to air flow, have adequate strength and cohesion to resist erosion by air flow and do not produce dust. They shall be free of odour and proof against rot, damp and vermin and shall comply with the requirements as to fire and smoke hazards. Adhesives shall be compatible with the sound absorbent material and should preferably be non-flammable.

Where sound absorbent material and /or special attenuators are indicated they shall either reduce the sound level in the space, due to the equipment, to the specified value or shall give the specified sound level attenuation over the specified range of frequencies. Purpose made attenuators shall be tested in accordance with HVRA Laboratory Report No. 55 (Code for the measurement of the performance of unit silencers). The insertion loss and generated noise level for each octave band and the pressure loss of the silencer shall be stated.
Attenuators shall be suitable for internal air pressure of 100N/m2, air stream temperatures of up to 40oc and free from air stream erosion for velocities up to 25m/s. The mineral wool lining shall be rot, vermin and fire-proof. Attenuator casing shall be pre-galvanized sheet steel with galvanized pre-drilled flanges.

13.2 Rectangular Attenuators

These shall be rectangular in section with splitters forming air passages in parallel. The mineral wool lining shall be resin bonded.

13.3 Circular Attenuators

Circular section attenuators will have a central pod. The mineral wool lining shall be retained by expanded steel. The end flanges shall be match drilled to suit the fan which they are fixed to.

13.4 Acoustic lining

Where indicated on the contract drawings, the ductwork shall be acoustically lined. The lining shall consist of resin bonded mineral wool 25mm, thick fixed to the ductwork by a suitable adhesive.

14.0 INSTRUMENTS

14.1 General

The instruments, gauges etc, detailed in this section shall be provided in addition to those associated with specific items of plate and detailed elsewhere, they shall be mounted in accessible positions and shall be easily read.

14.2 System Static Pressure Gauge

A system static pressure gauge shall be provided for the system. It shall consist of a small inclined manometer gauge similar to a filter gauge. The edge of the gauge shall be connected to the system and the other end shall be left open to the plant room but where fluctuation of the

static pressure in the plant room may occur the gauge shall be connected across the main fan. Such fluctuations may be caused by wind pressure affecting large open-air intakes to the plant room.

15.0 VIBRATION, NOISE AND SOUND INSULATION

15.1 Anti-Vibration Mountings

Fans, compressors, motors and any other vibration-inducing equipment shall be isolated from the building structure by anti -vibration mountings which shall be compressed machinery cork, spring or rubber dampers or rubber/metal bearers as indicated.

15.2 Noise

The noise produced by the installation in the spaces served, in any adjacent buildings and in the open-air surrounding plant rooms shall be kept as low as possible. This shall be specially considered in the selection of fan motors, grilles and the internal finish and arrangements of extraction ducting. Noise level information for fans based on octave analysis data, shall be stated. The reference level and the testing technique shall be stated.

The sound level in the spaces served, due to the equipment shall comply with the recommended design criteria given in the IHVE Guide (Table 13.1 of 1965 Edition). The maximum sound pressure level due to ventilation system must not exceed value mentioned below measured by a reference value of $2 \times 10 \times 10^{-5}$ N/m^2 transferred to a logarithmic scale, and measured at any point 1.5 meters above the floor and 1.0 meters from the walls.

The maximum sound pressure level measured at any point 4 metres from the extract point must not exceed 55dB.The maximum sound pressure level measured at any point 4 metres from fans must not exceed 60dB.

16.0 THERMAL INSULATION

16.1 General Description

All heated, cooled, and recirculated air ductwork shall be insulated. Insulation shall be of 25mm thick expanded polystyrene sheet, or spray applied polyurethane foam to a uniform thickness of 25mm. Polystyrene shall be fixed so that the edges butt closely without gap and the insulation shall overlap at corners by the thickness of the insulation. The sheet shall be fixed by means of a suitable adhesive and plastic impingement pines attached to the ductwork.

16.2 Ductwork in Plant Room

The insulation described above in Clause 5.1 above shall be finished by the application of a 15mm thick layer of hard setting finish. Insulation shall bevelled thick to angle of 45o at all connecting flanges, access hatches and all other places where operation or maintenance is likely to cause the breaking of the insulation. The insulation shall then be given a vapour sealing by the application of two coats of anti-condensation paint.

16.3 Ductwork External to plant Rooms

The insulation described in Clause 5.1 above shall finish by the application of two coats of bitumastic.

17.0 ELECTRICAL EQUIPMENT AND WIRING

17.1 Scopes

The responsibility for electrical equipment and wiring shall be as defined as below-:

An on-off starter shall be provided and placed in the appropriate position for connection of the fans required for the installation and within a time agreed with the Engineer fully detailed wiring diagrams for all connections to them shall be availed.

The Installer shall be responsible for the accuracy of all wiring diagrams provided by him and for the correct internal wiring of all pre-wired equipment supplied. The Installer shall reimburse the full cost of abortive or remedial work arising from any error in these aspects.

17.2 General

Unless otherwise indicated all electrical equipment and installation shall be suitable for use in ambient temperatures up to 40^{o}C and relative humidities up to 90%. For tropical climates, electrical equipment shall be suitable for use in the temperature and humidity as indicated; it shall be proof against atmospheric corrosion, including that of saline air where relevant, and materials shall not be susceptible to mould growth or attack by termite and similar hazards.

17.3 Electrical Motors

Electrical motors shall comply with BS 170 2048 or with BS 2613 and BS 3979 as appropriate. All motors shall have Class E insulation (BS2757) and can be continuously rated.

They shall be screen protected (BS2817) unless otherwise indicated. Under all normal conditions without being overloaded. All motors larger than 0.75kw output shall be three phases, for motors above 15kw output the type of motor and method of starting shall be such as to limit the starting and run -up currents to three times the rated full load current unless otherwise indicated. No motor shall run faster than 25 rev/s unless otherwise indicated.

18.0 INSPECTION, COMMISSION AND TESTING

18.1 General

Unless otherwise indicated tests shall be carried out in accordance with the appropriate BS or CP. Test certificates for works tests, site tests and tests required by BS shall be submitted in duplicate to the Engineer.

18.2 Testing

Where an individual inspection or tests take place at outside the site of the works representatives of the Engineer will be required to be present.

Unless otherwise indicated the contract shall include the cost of all tests, necessary instruments, plant supervision and labour both at work and on site. The accuracy of the instruments shall be demonstrated where so directed by the Engineer.

The site test shall be of at least six hours duration. Any defects or workmanship, materials and performance maladjustments or other irregularities which become apparent during the tests shall

be rectified by the supplier at his expense and the tests shall be repeated at his expense to the satisfaction of the Engineer.

The Supplier/Installer"s representative present at the site tests shall be fully conversant with the operation of the thermostatic controls and shall be expected to explain the operation and safety controls forming part of the installation to the employer"s representatives.

18.2.1 Site Tests

The Installer shall supply all instruments and equipment necessary to carry out site tests and shall arrange with other parties for the testing of associated equipment which may affect the performance of the plants installed under these works.

18.2.2 Site Tests-Fans

All fans shall be charged with suitable lubricant and shall be tested upon completion of the auxiliary system erection to ascertain that the performance of each fan complies with the requirements of the specification.

18.2.3 Completion of Works – Balancing and Commissioning

Following the site tests and prior to handover, Mechanical Ventilation or Air-Conditioning systems shall be balanced by means of grills, dampers and other special controls installed so to give the required air flow rates and where applicable the required temperatures, pressures and humidity conditions in all areas served by the said systems.

The complete system shall be balanced and commissioned as a whole. Sectional balancing and commissioning on any part of the system where this excludes final complete system balancing and commissioning shall not be accepted.

Test volumes within ducts shall be within +5% of the design volumes, and volumes at grills and diffusers shall be within +10% of the design volumes.

When the system has been balanced to the satisfaction of the project manager, it shall be run under complete automatic control for 72 hours continuous operation to ascertain any faults in operation before acceptance and handover. Any faults discovered during this time shall be corrected and another test or tests of 72 hours duration shall be carried out to ensure satisfactory operation, all at the expense of the Supplier/Installer.

During this phase, particular attention shall be paid to:

- The maintenance of cleanliness of all plant and extraction systems during construction and ensuring that extraction systems are cleaned through as part of commissioning.

- The protection of plant, particularly sensitive or fragile items, from the activities of other trades during construction and from dirt and mal operation during commissioning.

- The protection of electrical of electrical equipment from damp during construction and commissioning.

19.0 CONTROL SYSTEM

Particular attention shall be paid to the following features:

- Satisfactory operation of any automatic or manually operated sequence to be used in the event of fire.
- Safety in the event of failure and of sudden resumption of electricity supply.
- Satisfactory operation of safety interlocks designed for the protection of personnel, such as those associated with the high voltage electrically operated plant.

The following items shall be checked and/or tested and recorded on the site Test Certificate: -

- Set devised value of all control devices
- Satisfactory operation of equipment protection devices.
- Satisfactory operation of all sequencing operations and alternate working selections and automatic or manual change-over of duplicate plant.

20.0 NOISE AND SOUND CONTROL

Sound level reading shall be taken with a simple sound level meter using the „A" scale weighting network. The spaces in which readings shall be taken shall be as agreed with the Engineer but will in general be the following: -

- Plant rooms
- Occupied rooms adjacent to plant rooms
- Outside plant rooms facing air intakes and exhaust to assess possible nuisance to adjacent accommodation. If the adjacent accommodation is private residential building
- Tests may be required at night.
- In the space served by the first grille or diffuser after a fan outlet.

- In any space where, by the addition of special silencing material or techniques of by classification of use, a low level of noise is clearly required.

Alternatively, sound level reading shall be taken using a sound analyzer to give an octave band analysis of the ground spectrum and to pinpoint the frequency values of peak sound levels. The spaces in which readings shall be taken shall be as agreed with the Engineer but will in general be as detailed in paragraph above.

21.0 OPERATING AND MAINTAINANCE INSTRUCTION

The Supplier/Installer shall demonstrate and explain the plant and the method of starting, running and stopping to such staff as the Engineer shall nominate.
He shall provide three sets of operating and maintenance instructions which shall be enclosed in durable covers. The operating and maintenance instructions shall include; -

- A brief outline of the operation of the plant.
- Instructions on how to start and stop the plant, noting any safety and / or sequencing arrangements.
- Details of required maintenance with suggested frequency of action
- Details of all lubricating oils and greases required and filter replacement
- Details of each item of plant including the name and address of the manufacturer, type and model, serial number, duty and rating.

The operating and maintenance instructions shall be handed to the Engineer not later than at the end of the commissioning period.

22.0 SPARE PARTS

The Installer shall submit a priced list of any extra materials which he recommends should be purchased for the Ventilating and Air Conditioning Plants and all associated equipment and control gear and extras not supplied as standard. He shall be required to give a guarantee that he will hold sufficient running stock of spare parts for the maintenance of the equipment.

BILLS OF QUANTITIES

STATEMENT OF COMPLIANCE

a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.

b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ……..……. *for and on behalf of the Tenderer*

Date: ……

Official Rubber Stamp: ……..……

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. 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.

4.4. 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.

4.5. 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.

4.6. 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.

4.7. 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.

4.9 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-Clause13.5 and Clause 13.6 of the General Conditions of contract.

4.10 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.

4.11 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.

4. 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 a 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 done before such work is cover-up.

5.5 All items that have not been measured and therefore not subject to tenders 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 "Provisional Sum for Contingencies" and "Provisional Sum for Fluctuations".

xii. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2nd edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*

2. The Site is situated in **KENYA.** It is approximately **……...** Access to the site shall be through**……..…** This 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 progress on 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 are 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, water pipes 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. They 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 at own 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.

24. 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.

25. 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 his rates.

26. The Contractor shall provide temporary sheds, offices mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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 tore move 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.

35. 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.

36. The Contractors 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.

37. The Contractors 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 there from in the build-up of rates.

38. 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.

39. 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.

40. 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 VAT 1.19 as instructed elsewhere.

41. 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: 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 Main Contractor, all payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site				
4	Site location: The site of the Contract Works is **.** 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 to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
5	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. 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.				
6	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				
8	Variation: No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager				
9	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.)				
	Sub-Total for Preliminaries c/f to Page 64				

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 to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
14	Provision of services by the Main contractor: In accordance with Clause 1.08 of this Specification the Contractor shall make the following facilities available to the Sub-contractor: 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. b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized. 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. 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. ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.				
15	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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
17	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.				
18	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.				
20	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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
21	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.				
22	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 WorksIf 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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
24	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. 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.				
25	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.				
26	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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications				
27	Testing and Inspection – manufactured plant: The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials.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. 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.				
28	Testing and Inspection – Installation: Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.				
29	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. 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				
30	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.				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
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				
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				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager.				
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	**200,000**	
38	Allow for profit and Attendance for the above				
	Sub-Total for Preliminaries c/f to Page 64				

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
	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.				
41	Any other preliminaries;				
	Subtotal above				
	Subtotal brought forward from page …..... 54				
	Subtotal brought forward from page …..... 55				
	Subtotal brought forward from page …..... 56				
	Subtotal brought forward from page …..... 57				
	Subtotal brought forward from page …..... 58				
	Subtotal brought forward from page …..... 59				
	Subtotal brought forward from page …..... 60				
	Subtotal brought forward from page …..... 61				
	Subtotal brought forward from page …..... 62				
	Subtotal brought forward from page …..... 63				
TOTAL FOR BILL NO. 1 - PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY PAGE ….... 115					

GROUND FLOOR LEFT WING OFFICES					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	BILL NO. 2. SPLIT AIR CONDITIONING SYSTEM				
	Supply , Installation, testing and commissioning, upon approval of working drawings, of the following items. NB: Outdoor units shall be mounted on external walls.				
	SPLIT AIR CONDITIONING SYSTEM				
	The indoor unit shall be High Wall type air-cooling unit of capacity as indicated . The air conditioning unit shall be supplied complete with room thermometer, room thermostat controls and remote control device. It shall charged with R410A refrigerant or any other non ozone depleting refrigerant. The unit shall be such that if the power supply goes off, it will start automatically after power is restored with three minute delay. The outdoor unit shall have matching capacity with the indoor unit. The unit shall be "Carrier" Model or equal and approved.				
A	Press Conference office 7.1 kw(24,000 BTU)	2	No.		
B	Dooping room 5.3 kw(18,000 BTU)	2	No.		
C	Media room 7.1 kw(18,000 BTU)	2	No.		
D	Office 5.3 kw(18,000 BTU)	2	No.		
E	Office 3.5 kw(12,000 BTU)	2	No.		
	Refrigeration Pipework				
F	Refrigeration liquid line pipework including 25mm Amaflex insulation.	155	LM		
G	Refrigeration gas line pipework including 25mm Amaflex insulation.	155	LM		
	Refrigerant				
H	Allow R410A refrigerant for charging air conditioning system.	14	Item		
	Drain				
I	25mm PVC condensate drainage pipework, class D, including bends, clips, joints and tees in the running lengths of the pipe.	155	LM		
	Surge Protector				
J	Power surge protector as Solatek to suite or equal and approved.	14	No.		
	Electrical Works				
K	Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and wiring from indoor unit to outdoor unit.	14	Item		
	Mounting Bracket				
L	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.	14	Item		
	Wall Mounted Wired Remote Controller				
M	Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	14	No.		
	Trunking				
N	75x50mm approved PVC trunking for concealing the refrigerant pipework.	122	LM		
	Total cost Split Air Conditioning carried to collection page for Ground Floor Left Wing				

FIRST FLOOR LEFT WING OFFICES					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SPLIT AIR CONDITIONING SYSTEM *Supply , Installation, testing and commissioning, upon approval of working drawings, of the following items. NB: Outdoor units shall be mounted on external walls.* **SPLIT AIR CONDITIONING SYSTEM** *The indoor unit shall be High Wall type air-cooling unit of capacity as indicated . The air conditioning unit shall be supplied complete with room thermometer, room thermostat controls and remote control device. It shall charged with R410A refrigerant or any other non ozone depleting refrigerant. The unit shall be such that if the power supply goes off, it will start automatically after power is restored with three minute delay. The outdoor unit shall have matching capacity with the indoor unit. The unit shall be "Carrier" Model or equal and approved.*				
A	VIP Boardroom 7.1 kw(24,000 BTU)	4	No.		
B	VIP Terrace 7.1 kw(24,000 BTU)	2	No.		
C	Office 3.5 kw(12,000 BTU)	2	No.		
D	Office 3.5 kw(12,000 BTU)	2	No.		
	Refrigeration Pipework				
E	Refrigeration liquid line pipework including 25mm Amaflex insulation.	100	LM		
F	Refrigeration gas line pipework including 25mm Amaflex insulation.	100	LM		
	Refrigerant				
G	Allow R410A refrigerant for charging air conditioning system.	10	Item		
	Drain				
H	25mm PVC condensate drainage pipework, class D, including bends, clips, joints and tees in the running lengths of the pipe.	100	LM		
I	**Surge Protector** as solatek to suite or equal and approved	10	No.		
	Electrical Works				
J	Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and wiring from indoor unit to outdoor unit.	10	Item		
	Mounting Bracket				
K	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.	10	Item		
	Wall Mounted Wired Remote Controller				
L	Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	10	No.		
	Trunking				
M	75x50mm approved PVC trunking for concealing the refrigerant pipework.	150	LM		
	Total cost Split Air Conditioning carried to collection page for First Floor Left Wing				

SECOND FLOOR LEFT WING OFFICES					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SPLIT AIR CONDITIONING SYSTEM *Supply , Installation, testing and commissioning, upon approval of working drawings, of the following items. NB: Outdoor units shall be mounted on external walls.* **SPLIT AIR CONDITIONING SYSTEM** *The indoor unit shall be High Wall type air-cooling unit of capacity as indicated . The air conditioning unit shall be supplied complete with room thermometer, room thermostat controls and remote control device. It shall charged with R410A refrigerant or any other non ozone depleting refrigerant. The unit shall be such that if the power supply goes off, it will start automatically after power is restored with three minute delay. The outdoor unit shall have matching capacity with the indoor unit. The unit shall be "Carrier" Model or equal and approved.*				
A	VVIP Lounge area 7.1 kw(24,000 BTU)	2	No.		
B	Office 3.5 kw(12,000 BTU)	1	No.		
C	Office 3.5 kw(12,000 BTU)	1	No.		
	Refrigeration Pipework				
D	Refrigeration liquid line pipework including 25mm Amaflex insulation.	40	LM		
E	Refrigeration gas line pipework including 25mm Amaflex insulation.	40	LM		
	Refrigerant				
F	Allow R410A refrigerant for charging air conditioning system.	4	Item		
	Drain				
G	25mm PVC condensate drainage pipework, class D, including bends, clips, joints and tees in the running lengths of the pipe.	40	LM		
H	**Surge Protector** as solatek to suite or equal and approved	4	No.		
	Electrical Works				
I	Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and wiring from indoor unit to outdoor unit.	4	Item		
	Mounting Bracket				
J	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.	4	Item		
	Wall Mounted Wired Remote Controller				
K	Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	4	No.		
	Trunking				
L	75x50mm approved PVC trunking for concealing the refrigerant pipework.	40	LM		
	Total cost Split Air Conditioning carried to collection page for Second Floor Left Wing				

THIRD FLOOR LEFT WING OFFICES					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SPLIT AIR CONDITIONING SYSTEM *Supply , Installation, testing and commissioning, upon approval of working drawings, of the following items. NB: Outdoor units shall be mounted on external walls.* **SPLIT AIR CONDITIONING SYSTEM** *The indoor unit shall be High Wall type air-cooling unit of capacity as indicated . The air conditioning unit shall be supplied complete with room thermometer, room thermostat controls and remote control device. It shall charged with R410A refrigerant or any other non ozone depleting refrigerant. The unit shall be such that if the power supply goes off, it will start automatically after power is restored with three minute delay. The outdoor unit shall have matching capacity with the indoor unit. The unit shall be "Carrier" Model or equal and approved.*				
A	Audio Visual Room 7.1 kw(24,000 BTU)	2	No.		
B	Media Terrace 7.1 kw(24,000 BTU)	2	No.		
C	Office 3.5 kw(12,000 BTU)	1	No.		
	Refrigeration Pipework				
D	Refrigeration liquid line pipework including 25mm Amaflex insulation.	50	LM		
E	Refrigeration gas line pipework including 25mm Amaflex insulation.	50	LM		
	Refrigerant				
F	Allow R410A refrigerant for charging air conditioning system.	5	Item		
	Drain				
G	25mm PVC condensate drainage pipework, class D, including bends, clips, joints and tees in the running lengths of the pipe.	50	LM		
H	**Surge Protector** as solatek to suite or equal and approved	5	No.		
	Electrical Works				
I	Allow for associated electrical works from the local isolator provided by others within one meter to the air conditioning units and wiring from indoor unit to outdoor unit.	5	Item		
	Mounting Bracket				
J	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.	5	Item		
	Wall Mounted Wired Remote Controller				
K	Fully wired wall mounted remote controller panel, wiring and conduit works including but not limited to interconnecting cable between the outdoor and indoor units.	5	No.		
	Trunking				
L	75x50mm approved PVC trunking for concealing the refrigerant pipework.	60	LM		
	Total cost Split Air Conditioning carried to collection page for Third Floor Left Wing				

MAIN COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total cost Split Air Conditioning carried from the collection page for Ground Floor Left Wing F-12 ……	
2	Total cost Split Air Conditioning carried from the collection page for First Floor Left Wing F-13 ……	
3	Total cost Split Air Conditioning carried from the collection page for Second Floor Left Wing F-14 ……	
4	Total cost Split Air Conditioning carried from the collection page for Third Floor Left Wing F-15 ……	
	Total Cost for Split air Conditioning System Carried to Summary Page	

Bill No.3 Toilet Extract Installation Works					
LEFT WING					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs.)**	**Amount (Kshs.)**
	EXTRACTION				
	Wall Extract Fans for Washrooms				
A	Extract fan capable of a volume flow rate of $85m^3/hr$ against a pressure drop of 80 N/m^2. Fan to beacoustic silenced box fan complete with supports, flexible connections and anti vibrations mountings.To be as S &P' HCM-225N Model or equal and approved.	10	No.		
B	Extract fan capable of a volume flow rate of $600m^3/hr$ against a pressure drop of 80 N/m^2. Fan to beacoustic silenced box fan complete with supports, flexible connections and anti vibrations mountings.To be as S &P' HCM-225N Model or equal and approved.	10	No.		
	Electrical Works				
C	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.	10	Item		
	Total Cost for Toilet Extract Carried to Summary Page				

RIGHT WING					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs.)**	**Amount (Kshs.)**
	EXTRACTION				
	Wall Extract Fans for Washrooms				
A	Extract fan capable of a volume flow rate of $85m^3/hr$ against a pressure drop of 80 N/m^2. Fan to beacoustic silenced box fan complete with supports, flexible connections and anti vibrations mountings.To be as S &P' HCM-225N Model or equal and approved.	10	No.		
B	Extract fan capable of a volume flow rate of $600m^3/hr$ against a pressure drop of 80 N/m^2. Fan to beacoustic silenced box fan complete with supports, flexible connections and anti vibrations mountings.To be as S &P' HCM-225N Model or equal and approved.	10	No.		
	Electrical Works				
C	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.	10	Item		
	Total Cost for Toilet Extract Carried to Summary Page				

BILL NO. 4. FIRE SUPPRESSION SYSTEM AT SERVER ROOM					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Supply and install fire suppression system with the following items to the satisfaction of the Engineer. The server room and storage area volume are 35m ^{3} and 82m ^{3} respectively.The tenderer to submit the technical brochures and working calculations together with the tender for evaluation. Alternative and approved systems utilising inert gases or a mixture of such gases may be provided.				
A	80litre (32.1Kg) normal charged capacity Argonite specified containers charged with Argonite gas at 300bar with dimensions 267mm diameter and 1910mm high when fitted with valve cylinders to be complete with discharge valves gauges and hoses for connection to the manifold. All to be as "Fike" or approved equivalent.	2	No.		
C	Cylinder support bracket system	1	Item		
D	50mm schedule 40 discharge manifold kit with 2 No. ports complete with end caps and a threaded port for pressure switch. All to be as "Fike" or approved equivalent.	1	Item		
E	25mm selector switch	1	No		
F	Actuation package	1	Item		
G	Solenoid valve/ manual release valve assembly inclusive of hoses, connectors etc.	1	Item		
H	50mm pressure reducing valve	1	No.		
I	15mm Argonite discharge Nozzles V type 6 orifice, Nozzle coverage 360 degrees pattern and a radius of 3M. The Nozzle will be located less than 300mm below the ceiling as "Fike" or approved equivalent.	5	No.		
J	Relief valve	1	No		
K	Check valve	2	No		
L	Pressure gauge	2	No		
M	Pressure relief/vent	2	No		
N	Discharge pressure switch	1	No.		
O	Flexible discharge horse	2	No.		
P	Controls, addresable Control panel and wiring complete with standby batterries	1	Item		
Q	Maintenance switch	1	No.		
R	Double Action manual /electric releasing switch	1	No.		
S	Abort switch	1	No.		
	Total Carried to Summary Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Ionization sensors	4	No.		
B	Photo electric sensors	4	No.		
C	Audible alarms	1	No.		
D	Visual alarm	1	No.		
	Pipework				
E	25mm diameter seamless black pipe Schedule 40	6	LM		
F	20mm diameter seamless black pipe Schedule 40	40	LM		
H	20mm diameter pipe bend/elbow	2	No		
J	25mmX20mm pipe reducer	2	No		
K	25mmX15mm pipe reducer	2	No		
L	20mmX15mm pipe reducer	2	No		
M	25mm equal tee	2	No		
N	20mm equal tee	1	No		
O	Allow for associated Builders work	1	Item		
P	Allow for pipework anchorage/hangers	1	Item		
Q	Allow for painting system pipework	1	Item		
R	Electrical works and earthing	1	Item		
S	Labelling and warning signs inside and outside the rooms	2	No		
T	Calculations,working drawings and as installed drawings	1	Item		
	Dry Chemical Powder Fire Extinguisher				
U	6kg dry chemical podwer portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	2	No		
	Total Carried to Summary Page				

SUMMARY PAGE

Item	Description	Total Cost
1	Total works from Page F-19	
2	Total works from Page F-20	
3	Contigency	**300,000**
Total Cost for Fire Suppression System for server room		

SUMMARY PAGE

Item	Description	Total Costs
1	Total for Preliminaries and General Items	**200,000**
2	Total Carried Forward from Collection Page for Split Air Conditioning Installation Works	
3	Total Carried Forward from Collection Page for Toilet Extract Installation Works	
4	Total Carried Forward from Collection Page for Fire Suppression Installation Works	
6	**Total Sum**	
7	Allow for Contingency Sum (5 %)	
	Total Cost for Mechanical Ventilation and Air Conditioning Carried to Form of Tender	

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

ITEM	DESCRIPTION	UNIT	RATE (Kshs)
		No.	
A	Celling Cassete AC 7.1 kw	No.	
B	Celling cassete AC 5.2 kw	No.	
C	Celling cassate AC 3.5 kw	No.	
		No.	
D	32mm diameter seamless pipework	No.	
		No.	
E	VRV air conditioning	No.	
	4Way Ceilling cassate	No.	
F	a) 6kw model	No.	
G	b) 5.6kw model	No.	
H	c) 2.8kw model		
I	d) 8.2kw model		
	e) 4.5kw model		
J	AVS Power Surge		

G: TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

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/Engineer.
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.**

S/NO	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Split Air-conditioning 3.5KW			
B	SplitAirconditioning5.2kw			
C	SplitAirconditioning7.1kw			
D	Surge Protector			
E	Extract fans 85N/m2			
F	Extract fans 600m3			
G	ArgonitedischargeNozzles			
H	Relief Valve			
I	Check valve			
J	Discharge pressure switch			
K	Ionization sensors			
L	Photo electric sensors			
M	Visual alarm			
N	32mm diameter seamless			
O	pipework			

	20mm diameter seamless pipework 20mm diameter pipe bend 20mm diameter pipe reducer 20mm diameter pipe equal tee 75X50mm PVC trunking 25mm gas line pipework 25mm pvc class D			

Catalogue must be attached for all the items in the schedule of material above

SECTION H:

STANDARD FORMS

NOTE:

ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BE PART OF THE EVALUATION CRITERIA

STANDARD FORMS

GE

1. KEY PERSONNEL……..... 120
2. CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS…….. 121
3. SCHEDULE OF ON-GOING PROJECTS……..……. 122
4. DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS….. 123
5. SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS……..…… 124

1 KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

……..	……..……	……..……
Title	Signature	Date

2 CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS

Work performed on works of a similar nature and volume over the last five years.

PROJECT NAME	NAME OF CLIENT	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

I certify that the above works were successfully carried out and completed by ourselves.

Title Signature Date

3 SCHEDULE OF ON-GOING PROJECTS

Details of on-going or committed projects, including expected completion date.

PROJECT NAME	NAME OF CLIENT	CONTRACT SUM	% COMPLETE	COMPLETION DATE

I certify that the above works are currently being carried out by ourselves.

……. …… …….

Title Signature Date

3 DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH THE TENDERER IS INVOLVED AS ONE OF THE PARTIES

1. ._____.
2. ._____
3. ._____.
4. ._____.
5. ._____.
6. ._____.
7. ._____.
8. ._____.
9. ._____.
10. ._____.

4 SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)

MAIN SUMMARY PAGE

Item	Description	Amount
1	**Preliminaries**	
2	**Total for Plumbing & Drainage Installation Works**	
3	**Total for High and Low Tank Installation Works**	
4	**Total for Soccer Field Irrigation Installation Works**	
5	**Total for Air Conditioning and Mechanical ventillation**	
6	**Total for Fire Suppression Installation Works**	
7	**Total for Borehole Installation Works**	
	SUB TOTAL	
8	**Contigency provision for the above works(5 %)**	
	Totals For Mechanical Installation Works Total Carried To Grand Summary	

PROVISIONAL SUMS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	PROVISIONAL SUMS				
A	**Allow a provisional Sum of Kenya Shillings Five Million (Kshs.5,000,000.00) Only for Graphics and branding and Flag post**		**ITEM**		**5,000,000.00**
B	**Allow a provisional Sum of Kenya Shillings Five Million (Kshs.10,000,000.00) Only for Project Management expenses**		**ITEM**		**10,000,000.00**
C	**Allow a provisional Sum of Kenya Shillings Ten Million (Kshs.10,000,000.00) Only for Exterior finishes -CNC**		**ITEM**		**10,000,000.00**
D	**Allow a provisional Sum of Kenya Shillings Two Million (Kshs.2,000,000.00) Only for Landscaping Works.**		**ITEM**		**2,000,0000.00**
E	**Allow a provisional Sum of Kenya Shillings Twenty Million Million (Kshs.20,000,000.00) Only for Contingencies.**		**ITEM**		**20,000,000.00**

TOTAL FOR PROVISIONAL SUMS CARRIED TO GRAND SUMMARY **KSH** **47,000,000.00**

PS/1

GRAND SUMMARY

GRAND SUMMARY

S/NO	DESCRIPTION	PAGE NO.	FOR TENDERER USE ONLY	FOR OFFICIAL USE ONLY
			KSHS.	KSHS.
	GRAND SUMMARY			
1	**PRELIMINARIES**	P/1		
2	**BUILDERS WORK**	BW/1		
3	**CIVIL WORKS**	CIV/1		
4	**ELECTRICAL INSTALLATION SERVICES**	E/61		
5	**MECHANICAL INSTALLATION SERVICES**	M/120		
6	**PROVISIONAL SUMS**	PS/1		
	GRAND TOTAL CARRIED TO FORM OF TENDER (VAT INCLUSIVE)			

SIGNED:
(TENDERER'S NAME) ……

Address: ……

Tel No: ……

Date: ……

SIGNED:
(WITNESS'S NAME) ……

Address: ……

Tel No: ……

Date: ……

REPUBLIC OF KENYA

PROPOSED CONSTRUCTION OF ATHLETES HOSTELS

BILLS OF QUANTITIES

PREPARED BY:

KENYA SCHOOL OF TVET
P.O Box 44600 – 00100,
GIGIRI, NAIROBI

MARCH, 2025

ITEM	DESCRIPTION	AMOUNT
	BILL NO.1	
	PRELIMINARIES	
	SECTION 1	
	PARTICULAR PRELIMINARIES	
	EMPLOYER	
A	The Employer is Sports Kenya. The term "Employer" and "Government" wherever used in the contract document shall be synonymous.	
	PROJECT MANAGER	
B	The term "P.M" or "Project Manager" wherever used in these Bills of Quantities shall be deemed to imply the "Engineer" 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.	
	ARCHITECT	
C	The term "Architect" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.	
	QUANTITY SURVEYOR	
D	The term "Quantity Surveyor" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is the Ministry of Transport, Infrastructure, Housing and Urban Development & Public Works: State Department for Public Works, P.O.Box 30743-00100, NAIROBI	
	STRUCTURAL ENGINEER	
E	The term "Structural Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.	
	CIVIL ENGINEER	
F	The term "Civil Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.	
	ELECTRICAL ENGINEER	
G	The term "Electrical Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.	
	MECHANICAL ENGINEER	
H	The term "Mechanical Engineer" shall be deemed to mean "the P.M" as defined above whose address, unless otherwise notified, is 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.	
	DESCRIPTION OF THE WORKS	
I	The Works consist of Construction upto completion of 15,OOO Capacity Stadium	
	Carried to collection	

	LOCATION OF SITE	
A	The site of the proposed works is deemed to be as specified in the documents. The himself as to:- a) The nature, position, topography and access of the site b) The amount of the rubbish or debris to be cleared away before commencement c) The nature, current usage, proximity and size of adjoining property and buildings d) The availability of land for the erection and positioning of all temporary structures, The Contractor shall obtain approval from the relevant Local Authority in adherence to site access and erection of temporary structures and must ensure all No claim will be allowed for travelling or other expenses which may be incurred by the Contractor in visiting the site or preparing the tender for the works. The Contractor is advised that the site is within a compund in use and all measures should be taken to avoid nuisance to the existing users. All occupation health and safety requirements must be met as required by law. This includes prevention/ minimizing noise, dust, fumes, providing access to public facilities as required (lifts, washrooms, staircases). Notices should be given prior to disruption of services. Where necessary the Contractor will provide temporary facilities for use as instructed by the Project Manager.	
	MEASUREMENTS	
B	The works are measured in accordance with the Standard Method of Measurement of Building Works 2008 Edition, published by the Architectural Association of Kenya 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	
	SIGNING OF THE TENDER DOCUMENTS	
C	The bidder shall append his / her signature and / or company's rubber stamp on each and every page of tender document.	
	Carried to collection	

DEMOLITIONS AND ALTERATIONS

A The Contractor is to allow for all temporary protection required during the works specifically described

B Unless described as set aside for re-use all arising debris and surplus materials shall be carefully removed from building and carterd away from site.

C 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.

MATERIALS FROM DEMOLITIONS

D Any materials arising from demolitions and not re-used shall become the property of the Ministry of Public Works. The Contractor shall allow in his rates the cost of transporting the demolished materials to where directed by the Project Manager.,

CLEARING AWAY

E 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.

F 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.

CLAIMS / COMPENSATION EVENTS

G 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.

Carried to collection

	URGENCY OF THE WORKS	
A	The Contractor is notified that these " works are urgent" and should be completed within the period stated in the Conditions of Contract.	
B	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.	
	PREVENTION OF ACCIDENT, DAMAGE OR LOSS	
C	The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other nomal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accident	
	WORKING CONDITIONS	
D	The Contractor shall allow in his rates for any interferance 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.	
	SIGNBOARD	
E	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.	
	LABOUR CAMPS	
F	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.	
	PRICING RATES	
G	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.	
	Carried to collection	

	SECURITY	
A	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.	
	EXISTING SERVICES	
B	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	
	BID SECURITY	
C	The Bidder shall furnish, as part of his bid, a security in accordance with clause 19.1 of Instruction to Tenderers (Section I of the Tender Document) Guarantees issued as surety for the bid shall be valid for a period of One Hundred and Fifty Six (156) days from the date of Tender Opening.	
	PERFORMANCE SECURITY	
D	A bond of 5% of the contract sum will be required in accordance with clause 48.0 of Instruction to Tenderers (Section I of the Tender Document) and Clause 4.2 of the General Conditions of Contract (Section VIII of the Tender Document). Note that no payments on account of works executed will be made to the Contractor until he has submitted the Performance Bond to the Project Carried to collection	
	INSURANCE The Contractor shall insure as required in Condition No. 18 of the Conditions of	
	TENDER DOCUMENTS	
E	Tender documents are as listed in Clause 11 of Section I-Instruction to Tenderers of the Tender Document.	
	VALUE ADDED TAX	
F	The Contractor's attention is drawn to V.A.T PUBLIC NOTICE NO. 6 of 5th August, 1993 regarding the Finance Bill 1993 which expanded the V.A.T base to cover construction services amongst other items. The Contractor shall familiarise himself with the said notice and allow in all his Bills of Quantities rates for the net tax. (i.e less input tax where applicable) as required by law.	
G	The tenderer is advised that in accordance with Government Public Notice No.35 &36 dated 11th September 2003, operational from 1st October 2003, V.A.T will be deducted against the contract sum at the prevailing rate by the Employer and remitted directly to the Commissioner of V.A.T through all interim certificates. It should however be noted that this is not additional tax but a new mode of payement for V.A.T, any excess payment will be refundable once the Contractor has submitted monthly returns to the Commissioner of V.A.T who will do the refunds when satisfied that the V.A.T regulations have been complied with.	
	Carried to collection	

FORM OF CONTRACT

A The Form of Contract shall be as stipulated in the Republic of Kenya's Standard Tender Document for Procurement of Building Works (22nd April 2021 edition and updated in 21st April 2022) included herein under Section VIII of the Tender Documents

CONDITIONS OF CONTRACT

B These are numbered from 1 to 20 as set out under Section VIII of this Tender Document

C If the Contractor considers that compliance with any of the Conditions of Contract involves any expenses, he shall distribute the cost among the rates for the various items in the Bills of Quantities. No claim shall be allowed arising from the Contractor's compliance with any of the Conditions of Contract.

PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT

D The following are the insertions to be made in the appendix to the Contract Agreement: -

Period of Final Measurement 3 Months From Practical completion Defects Liability

Date for Completion weeks

Delay Damages 0.0025% of the contract price per day

Period of Interim Certificates Monthly Period of Honouring Certificates

Carried to collection

	COLLECTION Brought forward from page PP/1 Brought forward from page PP/2 Brought forward from page PP/3 Brought forward from page PP/4 Brought forward from page PP/5 Brought forward from page PP/6	
	TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO PRELIMINARIES MAIN SUMMARY	

ITEM	DESCRIPTION	AMOUNT
	BILL NO.2	
	GENERAL PRELIMINARIES	
A	PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification. The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.	
B	ABBREVIATIONS Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-	
	C.M. Shall mean cubic metre S.M. Shall mean square metre L.M. Shall mean linear metre MM Shall mean Millimetre Kg. Shall mean Kilogramme No. Shall mean Number Prs. Shall mean Pairs	
C	B.S. Shall mean the British Standard Specification Published by theBritish Standards Institution, 2 Park Street, London W.I., England. Ditto Shall mean the whole of the preceding description except as qualified in the description in which it occurs. m.s. Shall mean measured separately. a.b.d Shall mean as before described.	
	Carried to collection	

A	SUFFICIENCY OF TENDER The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the priced Bills of Quantities. Rates and prices quoted shall cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works	
B	RECORDS The Contractor shall ensure proper records are kept and maintained for : Daily Reports on Personnel and Machinery; tracked programme; site photographs in digital camera; weather charts/reports; site instruction book and query book. a digital camera shall be provided for taking progress photos	
C	PLANT, TOOLS AND VEHICLES Allow for providing all scaffolding, plant, tools and vehicles required for the works	
D	TRANSPORT. 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.	
	Carried to collection	

A MATERIALS AND WORKMANSHIP.

All work is to be carried out in accordance with the Ministry of Works General Specifications for Building Works, 1976 Edition together with any amendments thereto.
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.

B SIGN FOR MATERIALS SUPPLIED.

The Contractor will be required to sign a receipt for all articles and materials supplied by the CLIENT 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 CLIENT 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

C STORAGE OF MATERIALS

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.

Carried to collection

A	SAMPLES 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.	
B	GOVERNMENT ACTS REGARDING WORK PEOPLE ETC. Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. 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 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.	
	Carried to collection	

A	PUBLIC AND PRIVATE ROADS. The contractor shall 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.	
B	EXISTING PROPERTY. 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.	
C	OCUPATIONAL HEALTH AND SAFETY MEASURES The Project Manager expects the contractor to adhere to strict safety measures. In this regard the contractor should ensure that all his workers, the consultants and his sub-contractors workmen are wearing Personal Protective Equipment (PPE) before commencement of any work where applicable including overalls with the company name clearly printed on the back each with clearly marked Identification Numbers stitched or imprinted on. The Contractor shall allow for providing all watching, lighting, barriers,signs, covering open trenches and protection of the works, including Sub-Contract works, as may be necessary for the safety of the works and for the protection of the public and his own and Sub-Contractors' employees. He shall also ensure provision of first aid staff, access to ambulance services at all worksites and arrangement to access local hospital/dispensary with qualified medical staff. The Project Manager expects full compliance to this regulation and no excuses will be entertained for non-compliance.	
D	OCUPATIONAL HEALTH AND SAFETY PERSONEL The contractor shall allow for Occupational Health and Safety personnel as directed and afford every reasonable facility for the performance of their duties.	
	Carried to collection	

A	ACCESS TO SITE AND TEMPORARY ROADS. Means of access to the Site shall be agreed with the CLIENT 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	
B	AREA TO BE OCCUPIED BY THE CONTRACTOR 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	
C	OFFICE FOR THE PROJECT MANAGER The contractor shall , if so instructed, supply, maintain, service, clean and light a fully furnished, suitable office, having an approximate floor area of not less than 100 sqm for exclusive use of the project. The office shall have a sample room, a toilet and bathroom, kitchen of suitable dimensions with clean running water and electricity connected to the approval of the Project Manager. The Contractor shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the "PROJECT MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape. On completion of the contract, the contents of the office specified above shall revert to the Client. The contractor shall be responsible throughout the contract period for provision of insurance cover, maintenance of the office equipment and furniture, providing all necesary staff and providing security and garbage disposal facilities	
	Carried to collection	

A	PROVISIONAL SUMS. 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.Such sums are net and no addition shall be made to them for profit.	
B	PRIME COST (OR P.C.) SUMS. 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 . Persons or firms nominated by the Project Manager to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors.Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.	
C	PROGRESS CHART. 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.	
D	ADJUSTMENT OF P.C. SUMS. 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.	
	Carried to collection	

A	ADJUSTMENT OF PROVISIONAL SUMS. In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued , but should any part of the work be executed by a Nominated Sub-Contractor or the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.	
B	NOMINATED SUB-CONTRACTORS When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts 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".	
C	DIRECT CONTRACTS 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 in the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.	
	Carried to collection	

A	ATTENDANCE UPON OTHER TRADESMEN, ETC. 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.	
B	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 be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER. Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall, if the PROJECT MANAGER so directs, uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.	
	Carried to collection	

A	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.	
B	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.	
C	MATERIALS ARISING FROM EXCAVATIONS Materials of any kind obtained from the excavations shall be the property of the Client. 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.	
D	TEMPORARY DISPOSAL OF STORM WATER The Contractor shall allow for temporary drainage plumbing and piping for keeping the premises and site free from accumulation of water. He shall also allow for construction and maintaining any necessary storm water drainage structures as directed. The contractor shall control earthwork through cascading gabions and distribution channels fomr storm water. Protect excavated sections of the route of storm water during heavy rains. Provide erosion channels to natural drains and rivers/streams to minimize erosion. Design to incoporate existing drainage pattern and avoid disturbing the same	
	Carried to collection	

A	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 Client.	
B	WORKS TO BE DELIVERED UP CLEAN 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	
C	GENERAL SPECIFICATION. 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.	
	Carried to collection	

A	TRAINING LEVY The Contractor's attention is drawn to legal notice No. 237 of October, 1971, 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 Kshs. 50,000.00 in value. MATERIALS ON SITE 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.	
B	HOARDING The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails for a total length of approximately five hundred meters(1500 m) including all necessary gates. The Contractor is in addition required to take all precautions necessary for the safe custody of the works,materials, plant, public and Employer's property on the site.	
C	CONTRACTOR'S SUPERINTENDENCE/SITE AGENT 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.	
	Carried to Collection	

	COLLECTION	
	Brought Forward From Page GP/1	
	Brought Forward From Page GP/2	
	Brought Forward From Page GP/3	
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	Brought Forward From Page GP/13	
	TOTAL FOR GENERAL PRELIMINARIES CARRIED TO PRELIMINARIES MAIN SUMMARY	

BUILDERS WORKS

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS.	CTS.
	SECTION NO. 2					
	HOSTEL BLOCK					
	ELEMENT NO.1					
	SUBSTRUCTURES					
	ALL PROVISIONAL					
	Site clearance					
A	Clear site of all vegetation including small trees, scrubs and bushes, excavate to remove red soil, load and cart away; average depth of 150mm.	535	SM			
	Excavation					
B	Excavate to reduce levels not exceeding 1.50 metres deep from stripped levels.	160	CM			
C	Excavate for column bases commencing from reduced level: not exceeding 1.50 metres deep.	130	CM			
D	Excavate for strip foundation trenches commencing from reduced level: not exceeding 1.50 metres deep.	180	CM			
	Rock excavation					
E	Extra over all excavation for breaking up rock irrespective of class of rock.	15	CM			
	Plunking and strutting					
F	Allow for upholding and supporting sides of excavations including any necessary plunking and strutting.		ITEM			
	Disposal of Water					
G	Remove stagnant water and maintain all substructural works free from water by any means necessary including pumping, baling, etc.		ITEM			
	CARRIED TO COLLECTION					

	Return, fill and ram				
A	Approved imported fillings around sub-walls and columns: backfill and compact in 150mm layers.	120	CM		
	Removal of surplus materials				
B	Remove surplus soil from site to a place approved by local authority.	350	CM		
	Mass concrete mix (1:3:6): in				
C	50mm Thick blinding under strip foundations.	120	SM		
D	Ditto under column bases.	69	SM		
	Vibrated reinforced concrete (1:2:4):Class 20/20 in:-				
E	Column bases.	130	CM		
F	Columns.	4	CM		
G	Strip foundations.	24	CM		
H	150mm Thick ground floor slab.	503	SM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
J	8mm Diameter bars.	2705	KG		
K	10mm Ditto.	16230	KG		
L	12mm Ditto.	8115	KG		
	Mesh fabric reinforcement				
M	BRC Fabric mesh reinforcement Ref. A142 laid in concrete surface bed with minimum 150mm side and end laps (measured nett - no allowances made for laps; including bends tying wire and distance blocks) - Allow for laps	503	SM		
	CARRIED TO COLLECTION				

	Sawn formwork: to				
A	Column bases.	81	SM		
B	Columns.	72	SM		
C	Strip foundations.	80	SM		
D	Edges: ground floor slab 75 - 150mm girth.	111	LM		
	Approved load bearing square shaped natural stones from approved quarry minimum crushing strength 7.5 N/mm^2, medium chisel dressed on both sides, built to courses in cement/sand (1:3) mortar;				
E	200mm Thick walls.	249	SM		
	Hardcore				
F	300mm Thick hardcore filling in making up levels: well levelled and compacted in 150mm thick (maximum) layers.	463	SM		
	Blinding				
G	50mm Thick approved quality quarry dust blinding to surfaces of hardcore.	463	SM		
	Anti-termite treatment				
H	Termidor 25EC anti-termite chemical treatment, or other equal and approved anti-termite insecticide: applied by approved professional pest control specialist: applied strictly in accordance with the manufacturer's instructions: 10 year guarantee.	463	SM		
	Damp Proof Membrane				
I	1000 Gauge polythene sheet damp proofing membrane laid over hardcore bed, laid in minimum 150mm side laps; (measured nett - no allowances made for laps) - Allow for laps.	463	SM		
	Plinths				
K	16mm Thick cement/sand (1:3) render to plinth; wood float finish.	22	SM		
L	Approved bituminous paint to rendered plinths.	22	SM		
	CARRIED TO COLLECTION				

	COLLECTION				
	Brought forward from 2/1				
	Brought forward from 2/2				
	Brought forward from 2/3				
	TOTAL SUBSTRUCTURES CARRIED TO SUMMARY OF SECTION NO.2				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 2				
	REINFORCED CONCRETE SUPERSTRUCTURES				
	GROUND FLOOR				
	Vibrated reinforced concrete (1:2:4):Class 20/20 in:-				
A	Ring Beams.	30	CM		
B	Columns.	8	CM		
	Sawn formwork: to				
C	Sides and soffits: ring beams.	367	SM		
D	Columns.	80	SM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
E	8mm Diameter bars.	572	KG		
F	10mm Ditto.	2,288	KG		
G	12mm Ditto.	2,860	KG		
	FIRST FLOOR				
	Vibrated reinforced concrete (1:2:4):Class 20/20 in:-				
H	Ring Beams.	30	CM		
I	Columns.	8	CM		
J	150mm thick first floor slab	469	SM		
	Sawn formwork: to				
K	Sides and soffits: ring beams.	367	SM		
L	Columns.	127	SM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
M	8mm Diameter bars.	1,024	KG		
	TOTAL CARRIED TO COLLECTION				

A	10mm Diameter bars	4,096	KG		
B	12mm Ditto.	5,120	KG		
	SECOND FLOOR				
	Vibrated reinforced concrete (1:2:4):Class 20/20 in:-				
C	Ring Beams.	30	CM		
D	Columns.	8	CM		
E	150mm thick first floor	469	SM		
	slab Sawn formwork: to				
F	Sides and soffits: ring beams.	367	SM		
G	Columns.	127	SM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
H	8mm Diameter bars.	994	KG		
I	10mm ditto	3975	KG		
J	12mm ditto	4,968	KG		
	THIRD FLOOR/ROOF				
	Vibrated reinforced concrete (1:2:4):Class 20/20 in:-				
K	Gutter beam	5	CM		
L	150mm thick first floor slab	52	SM		
	Sawn formwork: to				
M	Gutter beam	117	SM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
N	8mm Diameter bars.	126	KG		
O	10mm ditto	506	KG		
P	12mm ditto	632	KG		
	TOTAL CARRIED TO COLLECTION				

	STAIRCASE & RAMP				
	Vibrated reinforced concrete :Class 20/20 in:-				
A	Staircase 1	5	CM		
B	Staircase 2	5	CM		
C	Ramp	4	CM		
	Sawn formwork: to				
D	Soffits of staircase landings	6	SM		
E	Sloping soffits of staircases	16	SM		
F	Risers, 75-150mm girth.	16	LM		
G	Edges of staircase waist, 150-225mm girth.	10	LM		
H	Soffits of ramp landings	2	SM		
I	Sloping soffits of ramp	8	SM		
J	edges of ramp 75-150mm girth.	4	LM		
K	Edges of ramp waist, 150-225mm girth.	2	LM		
	Bar reinforcement: high yield deformed bars to B.S 4461				
L	8mm Diameter bars.	233	KG		
M	10mm Ditto.	931	KG		
N	12mm Ditto.	1,163	KG		
	TOTAL CARRIED TO COLLECTION				
	COLLECTION				
	Brought forward from 2/5				
	Brought forward from 2/6				
	Brought forward from above				
	TOTAL REINFORCED CONCRETE SUPERSTRUCTURES CARRIED TO SUMMARY OF SECTION NO.2				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 3				
	WALLING				
	GROUND FLOOR				
	External walls				
	Approved load bearing square shaped natural stones from approved quarry minimum crushing strength 7.5 N/mm^2, machine cut on both sides, built to courses in cement/sand (1:3) mortar; complete with fair raking cutting to top of wall and labour and materials in eaves filling; as described in:-				
A	200mm Thick walling.	305	SM		
	Internal walls				
	Approved load bearing square shaped natural stones as before described in:-				
B	200mm Thick walling.	243	SM		
	Hessian based bituminous felt 3 ply membrane damp proof course or other equal approved damp-proof course; laid on and including cement and sand (1:4) mortar under:-				
C	200mm Wide.	200	LM		
	FIRST FLOOR				
	External walls				
	Approved load bearing square shaped natural stones from approved quarry minimum crushing strength 7.5 N/mm^2, machine cut on both sides, built to courses in cement/sand (1:3) mortar; complete with fair raking cutting to top of wall and labour and materials in eaves filling; as described in:-				
D	200mm Thick walling.	305	SM		
	TOTAL CARRIED TO COLLECTION				

	Internal walls				
	Approved load bearing square shaped natural stones as before described in:-				
A	200mm Thick walling.	1052	SM		
	SECOND FLOOR				
	External walls				
	Approved load bearing square shaped natural stones from approved quarry minimum crushing strength 7.5 N/mm^2, machine cut on both sides, built to courses in cement/sand (1:3) mortar; complete with fair raking cutting to top of wall and labour and materials in eaves filling; as described in:-				
B	200mm Thick walling.	305	SM		
	Internal walls				
	Approved load bearing square shaped natural stones as before described in:-				
C	200mm Thick walling.	1052	SM		
	THIRD FLOOR/ROOF LEVEL				
	External walls				
	Approved load bearing square shaped natural stones from approved quarry minimum crushing strength 7.5 N/mm^2, machine cut on both sides, built to courses in cement/sand (1:3) mortar; complete with fair raking cutting to top of wall and labour and materials in eaves filling; as described in:-				
D	200mm thick walling	96	SM		
	Precast Concrete Coping				
E	250mm wide x 50mm thick cast in-situ concrete coping, weathered and twice throated and laid on cement sand (1:4) mortar	35	LM		
	TOTAL CARRIED TO COLLECTION				

	COLLECTION Brought forward from 2/8 Brought forward from 2/9 **TOTAL** **WALLING** **CARRIED TO SUMMARY OF SECTION NO.2**				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 4				
	ROOF FINISHES & RAINWATER DISPOSAL				
	Roof structure				
	The following Wrot cypress, prime grade timber complete timber trusses comprising the following				
A	100x50mm wall plate	LM	125		
B	150x100mm tie beam	LM	505		
C	150x100mm rafters	LM	538		
D	150x100mm kingpost	LM	95		
E	150x100mm struts and ties	LM	758		
F	75x50mm purlins	LM	303		
	Wrot cypress, prime grade				
G	225x25mm thick fascia board	LM	101		
H	225x25mm thick barge board	LM	26		
I	50x50mm bearers	LM	320		
J	25mm thick t & g soffit boarding to eaves	SM	61		
K	ditto to slopping soffits of verges Roof cover	SM	15		
L	26 gauge IT5 roofing sheets and fittings; of approved pre-painted colour as supplied by Mabati Rolling Mills Ltd. or any other equal and approved, including side and end laps; fixed in accordance with manufacturer's printed instructions.	645	SM		
	CARRIED TO COLLECTION				

	Rainwater goods				
A	150mm Dia. upvc rainwater down pipes.	75	LM		
B	Extra over for swanneck.	8	NO		
C	Extra over for shoe.	8	NO		
	CARRIED TO COLLECTION				
	COLLECTION				
	Brought forward from 2/11				
	Brought forward from above				
	TOTAL **ROOFING & RAINWATER DISPOSAL** **CARRIED TO SUMMARY OF SECTION NO.2**				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 5				
	WINDOWS				
	GROUND FLOOR				
	Purpose made mild steel metal casement windows comprising 40 x 25 x 3 mm hot rolled steel framed outer sections, mullions and transomes fastened with 48mm countersunk screws at 500mm centres; complete with brass fixing lugs, stay bars, fasteners and all other ironmongery, with permanent vents with 3-ply mosquito gauze at the top; built into masonry including bedding frames in cement and sand (1:3) mortar and pointing in mastic all round				
A	Window overall size 2400mm x 600mm high comprising fixed and openable panels to details - W1.	1	NO		
B	Ditto size 3600mm x 1800mm high, ditto - W2.	12	NO		
C	Ditto size 800mm x 1200mm high, ditto - W3.	2	NO		
D	Ditto size 2000mm x 8000mm high, ditto - W5	1	NO		
E	Ditto size 2000mm x 4900mm high, ditto - W6	1	NO		
	Three coats first quality gloss oil paint to Crown Paints or equal and approved:-				
G	To windows; both sides measured flat.	214	SM		
	Glazing to metal with and including putty glazing compound.				
H	Provide sizes as per detail x 4mm thick clear glass unit with glazing gasket/putty.	105	SM		
I	Ditto obscure glass ditto.	2	SM		
	CARRIED TO COLLECTION				

	FIRST FLOOR				
	Purpose made mild steel metal casement windows comprising 40 x 25 x 3 mm hot rolled steel framed outer sections, mullions and transomes fastened with 48mm countersunk screws at 500mm centres; complete with brass fixing lugs, stay bars, fasteners and all other ironmongery, with permanent vents with 3-ply mosquito gauze at the top; built into masonry including bedding frames in cement and sand (1:3) mortar and pointing in mastic all round				
A	Window overall size 800mm x 1200mm high, comprising fixed and openable panels to details - W3	16	NO		
B	Ditto size 1200mm x 1800mm high, ditto - W4.	16	NO		
	Three coats first quality gloss oil paint to Crown Paints or equal and approved:-				
C	To windows; both sides measured flat.	100	SM		
	Glazing to metal with and including putty glazing compound.				
D	Provide sizes as per detail x 4mm thick clear glass unit with glazing gasket/putty.	35	SM		
E	Ditto obscure glass ditto.	15	SM		
	SECOND FLOOR				
	Purpose made mild steel metal casement windows comprising 40 x 25 x 3 mm hot rolled steel framed outer sections, mullions and transomes fastened with 48mm countersunk screws at 500mm centres; complete with brass fixing lugs, stay bars, fasteners and all other ironmongery, with permanent vents with 3-ply mosquito gauze at the top; built into masonry including bedding frames in cement and sand (1:3) mortar and pointing in mastic all round				
F	Window overall size 800mm x 1200mm high, comprising fixed and openable panels to details - W3	16	NO		
G	Ditto size 1200mm x 1800mm high, ditto - W4.	16	NO		
	CARRIED TO COLLECTION				

	Three coats first quality gloss oil paint to Crown Paints or equal and approved:-				
A	To windows; both sides measured flat.	100	SM		
	Glazing to metal with and including putty glazing compound.				
B	Provide sizes as per detail x 4mm thick clear glass unit with glazing gasket/putty.	35	SM		
C	Ditto obscure glass ditto.	15	SM		
	CARRIED TO COLLECTION				
	COLLECTION				
	Brought forward from 2/13				
	Brought forward from 2/14				
	Brought forward from above				
	TOTAL **WINDOWS** **CARRIED TO SUMMARY OF SECTION NO.2**				

	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 6				
	DOORS				
	GROUND FLOOR				
	Metal Doors				
A	Mild steel metal casement door overall size 2,000 x 2,400mm high infilled with 1.5mm thick m.s panel, 16mm solid square section bars, 5mm thick clear glass; including putty glazing, dowel hinges, approved lock, welding and priming, fixing into walls: painting with oil based paint; all necessary ironmongery to Architect's details - D1.	1	NO		
	Ditto but 1,500x2400mm high-D2	5	NO		
	Timber Doors				
	In wrot mahogany, prime grade				
B	50mm thick Solid core door with mahogany veneer facing swing side hung single door with 1No. openable leaf size 900 x 2,100mm high: to Architect's details - D3.	4	NO		
D	50mm thick hollow core door swing side hung single door with 1No. openable leaf size 800 x 2,100mm high: to Architect's details - D4.	2	NO		
	In Mild Steel				
E	150 x 50 x 2mm RHS Door frames.	33	LM		
	Prepare surfaces: apply three coats polyurethane clear lacquer or other equal approved: to timber surfaces:				
E	General timber surfaces: doors.	22	SM		
	CARRIED TO COLLECTION				

	Supply and fix: 'UNION' or other equal approved ironmongery: matching screws: locks to include a set of 3 keys: available from their authorised local dealers; brass finish to Architect's approval.				
A	3 - Lever mortice lock with brass furniture.	6	NO		
B	100mm Pressed brass butt hinges.	18	PRS		
	FIRST FLOOR				
	Timber Doors				
	In wrot mahogany, prime grade				
C	50mm thick Solid core door with mahogany veneer facing swing side hung single door with 1No. openable leaf size 900 x 2,100mm high: to Architect's details - D3.	18	NO		
D	50mm thick Solid core door with mahogany veneer facing swing side hung double door with 2No. openable leaf size 900 x 2,100mm high: to Architect's details - D5.	16	NO		
E	50mm thick hollow core door swing side hung single door with 1No. openable leaf size 800 x 2,100mm high: to Architect's details - D4.	16	NO		
	Prepare surfaces: apply three coats polyurethane clear lacquer or other equal approved: to timber surfaces:				
F	General timber surfaces: doors.	182	SM		
	Supply and fix: 'UNION' or other equal approved ironmongery: matching screws: locks to include a set of 3 keys: available from their authorised local dealers; brass finish to Architect's approval.				
G	2 - Lever mortice lock with brass furniture.	50	NO		
H	100mm Pressed brass butt hinges.	75	PRS		
	CARRIED TO COLLECTION				

	SECOND FLOOR				
	Timber Doors				
	In wrot mahogany, prime grade				
A	50mm thick Solid core door with mahogany veneer facing swing side hung single door with 1No. openable leaf size 900 x 2,100mm high: to Architect's details - D3.	18	NO		
B	50mm thick Solid core door with mahogany veneer facing swing side hung double door with 2No. openable leaf size 900 x 2,100mm high: to Architect's details - D5.	16	NO		
C	50mm thick hollow core door swing side hung single door with 1No. openable leaf size 800 x 2,100mm high: to Architect's details - D4.	16	NO		
	Prepare surfaces: apply three coats polyurethane clear lacquer or other equal approved: to timber surfaces:				
D	General timber surfaces: doors.	182	SM		
	Supply and fix: 'UNION' or other equal approved ironmongery: matching screws: locks to include a set of 3 keys: available from their authorised local dealers; brass finish to Architect's approval.				
E	2 - Lever mortice lock with brass furniture.	50	NO		
F	100mm Pressed brass butt hinges.	75	PRS		
	CARRIED TO COLLECTION				
	COLLECTION				
	Brought forward from 2/16				
	Brought forward from 2/17				
	Brought down from above				
	TOTAL DOORS CARRIED TO SUMMARY OF SECTION NO.2				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 7				
	FINISHES				
	GROUND FLOOR				
	Floor Finishes				
	Screed: cement and sand (1:4) on concrete: wood floated				
A	30mm Thick to receive ceramic tiles (m.s)	463	SM		
	Supply and fix coloured non-slip ceramic floor tiles as "Saj Ceramics" or any other equal and approved: on prepared screed (m/s): joints pointed in matching cement grout				
B	500 x 500 x 10mm Thick tiles.	463	SM		
C	100 x 10mm Thick skirting.	555	LM		
	Wall Finishes				
	Internal wall finishes				
	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); Steel trowelled				
D	13mm Thick to concrete/masonry surfaces.	1666	SM		
E	Prepare surfaces: apply three coats Crown Solo vinyl emulsion paint or other equal approved: on steel trowelled plaster: to				
	Walls.	1666	SM		
F	Backing; cement and sand 1:4 with approved integral dust proofing additive wood floated.				
	15mm Thick to receive ceramic tiles.	51	SM		
	CARRIED TO COLLECTION				

	Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:4). Grouting joints with matching colour cement				
A	200 x 250 x 6mm coloured ceramic tiles to wall surfaces; 2.7m high.	51	SM		
	External wall finishes				
	Cement and sand (1:3) render: steel trowelled: on masonry or concrete: to				
B	Masonry/concrete surfaces to receive textured paint.	50	SM		
	Prepare surfaces and apply "RUFF N TUFF" or equal and approved, to the Architect's approval.				
C	To masonry/concrete surfaces.	50	SM		
	Yellow stone cladding				
D	25mm Thick cut mazeras stone cladding in 50mm wide strips to walls jointed with and including approved contact glue.	333	SM		
	Ceiling Finishes				
E	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); steel trowelled	463	SM		
F	125 x 25mm Gypsum cornice, moulded.	555	LM		
	Prepare surfaces and apply one coat wood primer and roller paint three coats matt emulsion paint of approved colour as Crown Paints or similar approved to				
G	Plastered surfaces.	463	SM		
	FIRST FLOOR				
	Floor Finishes				
H	Screed: cement and sand (1:4) on concrete: wood floated				
	30mm Thick to receive ceramic tiles (m.s).	383	SM		
	CARRIED TO COLLECTION				

	Supply and fix coloured non-slip ceramic floor tiles as "Saj Ceramics" or any other equal and approved: on prepared screed (m/s): joints pointed in matching cement grout				
A	500 x 500 x 10mm Thick tiles.	383	SM		
B	100 x 10mm Thick skirting.	987	LM		
	Wall Finishes				
	Internal wall finishes				
	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); Steel trowelled				
C	13mm Thick to concrete/masonry surfaces.	2961	SM		
	Prepare surfaces: apply three coats Crown Solo vinyl emulsion paint or other equal approved: on steel trowelled plaster: to				
D	Walls.	2961	SM		
	Backing; cement and sand 1:4 with approved integral dust proofing additive wood floated.				
E	15mm Thick to receive ceramic tiles.	410	SM		
	Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:4). Grouting joints with matching colour cement				
F	200 x 250 x 6mm coloured ceramic tiles to wall surfaces; 2.7m high.	410	SM		
	External wall finishes				
	Cement and sand (1:3) render: steel trowelled: on masonry or concrete: to				
G	Masonry/concrete surfaces to receive textured paint.	268	SM		
	Prepare surfaces and apply "RUFF N TUFF" or equal and approved, to the Architect's approval.				
H	To masonry/concrete surfaces.	268	SM		
	CARRIED TO COLLECTION				

	Yellow stone cladding				
A	25mm Thick cut mazeras stone cladding in 50mm wide strips to walls jointed with and including approved contact glue.	21	SM		
	Ceiling Finishes				
B	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); steel trowelled	383	SM		
C	125 x 25mm Gypsum cornice, moulded.	987	LM		
	Prepare surfaces and apply one coat wood primer and roller paint three coats matt emulsion paint of approved colour as Crown Paints or similar approved to				
D	Pastered surfaces.	383	SM		
	SECOND FLOOR				
	Floor Finishes				
	Screed: cement and sand (1:4) on concrete: wood floated				
E	30mm Thick to receive ceramic tiles (m.s).	383	SM		
	Supply and fix coloured non-slip ceramic floor tiles as "Saj Ceramics" or any other equal and approved: on prepared screed (m/s): joints pointed in matching cement grout				
F	500 x 500 x 10mm Thick tiles.	383	SM		
G	100 x 10mm Thick skirting.	987	LM		
	Wall Finishes				
	Internal wall finishes				
	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); Steel trowelled				
H	13mm Thick to concrete/masonry surfaces.	2961	SM		
	CARRIED TO COLLECTION				

	Prepare surfaces: apply three coats Crown Solo vinyl emulsion paint or other equal approved: on steel trowelled plaster: to				
A	Walls.	2961	SM		
	Backing; cement and sand 1:4 with approved integral dust proofing additive wood floated.				
B		410	SM		
	Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:4). Grouting joints with matching colour cement				
C	200 x 250 x 6mm coloured ceramic tiles to wall surfaces; 2.7m high.	410	SM		
	External wall finishes				
	Cement and sand (1:3) render: steel trowelled: on masonry or concrete: to				
D	Masonry/concrete surfaces to receive textured paint.	268	SM		
	Prepare surfaces and apply "RUFF N TUFF" or equal and approved, to the Architect's approval.				
E	To masonry/concrete surfaces.	268	SM		
	Yellow stone cladding				
F	25mm Thick cut mazeras stone cladding in 50mm wide strips to walls jointed with and including approved contact glue.	21	SM		
	Gypsum plasterboard fixed with screws to timber roof structure (m.s);timber eggcrate framework/ brandering etc with joints taped and skimmed with gypsum plaster including forming and curved cuttings and "shadow gap" edge trims to wall and ceiling abutments				
G	12mm Thick Ceiling: patterns to Architect's approval and detail.	383	SM		
H	125 x 25mm Gypsum cornice, moulded.	987	LM		
	CARRIED TO COLLECTION				

	Prepare surfaces and apply one coat wood primer and roller paint three coats matt emulsion paint of approved colour as Crown Paints or similar approved to				
A	Ceiling surfaces.	383	SM		
B	Extra over ceiling boarding for construction of ceiling trap door overall size 730 x 730mm in 19mm plain blockboard hardwood lipped on all exposed edges to 75 x 50mm sawn timber frame, 95 x 15mm lining and 30 x 10mm stop, to opening size 700 x 700mm to Architect's details.	5	NO		
	THIRD FLOOR/ ROOF				
	Floor Finishes				
	Waterproofing				
	Waterproof screed to:				
C	Gutter beam	123	LM		
D	Floor slab	52	SM		
	External wall finishes				
	Yellow stone cladding				
E	25mm Thick cut mazeras stone cladding in 50mm wide strips to walls jointed with and including approved contact glue.	18	SM		
	STAIRCASE				
	Screed: cement and sand (1:4) on concrete: wood floated				
E	30mm Thick to receive terrazo to landing (m.s).	12	SM		
F	Ditto to risers, 100-200mm girth (m.s).	32	LM		
G	Ditto to treads, 200-300mm girth (m.s).	32	LM		
	Supply and fix polished terrazo paving as before described :				
H	To landings	12	SM		
I	To risers	32	LM		
J	To treads	32	LM		
	CARRIED TO COLLECTION				

	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); steel trowelled				
A	to soffits of landing	12	SM		
	Prepare surfaces and apply one coat wood primer and roller paint three coats matt emulsion paint of approved colour as Crown Paints or similar approved to				
B	Pastered surfaces.	12	SM		
	RAMP				
	Screed: cement and sand (1:4) on concrete: wood floated				
C	30mm Thick to receive terrazo to landing (m.s).	6	SM		
D	Ditto to sloping surfaces	10	SM		
E	Ditto to sloping sides, 200-300mm girth (m.s).	16	LM		
	Supply and fix polished terrazo paving as before described :				
F	To landings	6	SM		
G	Ditto to sloping surfaces	10	SM		
H	To sloping sides	16	LM		
	Plaster; 9mm first coat of cement, lime putty and sand (1:2:9); 4mm second coat of cement lime putty and sand (1:1:6); steel trowelled				
I	to soffits of landing	32	SM		
	Prepare surfaces and apply one coat wood primer and roller paint three coats matt emulsion paint of approved colour as Crown Paints or similar approved to				
J	Pastered surfaces.	32	SM		
	CARRIED TO COLLECTION				

	COLLECTION Brought forward from 2/19 Brought forward from 2/20 Brought forward from 2/21 Brought forward from 2/22 Brought down from 2/23 Brought down from 2/24 Brought down from 2/25				
	TOTAL **FINISHES** **CARRIED TO SUMMARY OF SECTION NO.2**				

ITEM	DESCRIPTION	QTY	UNIT		
	BILL NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 8				
	FITTINGS & FIXTURES				
	ALL PROVISIONAL				
	GROUND FLOOR				
A	Provide a Provisional Sum of Kenya Shillings Two Hundred Thousand Only (Kshs. 200,000/=) for complete construction of **Vanity Tops** at the Architect's discretion.		ITEM		
	FIRST FLOOR				
B	Provide a Provisional Sum of Kenya Shillings Three Hundred and Fifty Thousand Only (Kshs. 350,000/=) for complete construction of W**ardrobes** at the Architect's discretion.		ITEM		
C	Provide a Provisional Sum of Kenya Shillings Six Hundred and Fifty Thousand Only (Kshs. 650,000/=) for construction complete of **High Level Cabinets** at the Architect's discretion.		ITEM		
D	Provide a Provisional Sum of Kenya Shillings Three Hundred Thousand Only (Kshs. 300,000/=) for complete construction of **Vanity Tops** at the Architect's discretion.		ITEM		
	SECOND FLOOR				
E	Provide a Provisional Sum of Kenya Shillings Three Hundred and Fifty Thousand Only (Kshs. 350,000/=) for complete construction of W**ardrobes** at the Architect's discretion.		ITEM		
F	Provide a Provisional Sum of Kenya Shillings Six Hundred and Fifty Thousand Only (Kshs. 650,000/=) for construction complete of **High Level Cabinets** at the Architect's discretion.		ITEM		
G	Provide a Provisional Sum of Kenya Shillings Three Hundred Thousand Only (Kshs. 300,000/=) for complete construction of **Vanity Tops** at the Architect's discretion.		ITEM		
	TOTAL FITTINGS & FIXTURES CARRIED TO SUMMARY OF SECTION NO. 2				

ITEM	DESCRIPTION	QTY	UNIT		
	SECTION NO. 2				
	HOSTEL BLOCK				
	ELEMENT NO. 9				
	BALUSTRADING				
	Supply and fix 1000mm high balustrading fabricated from mild steel sections; comprising of 50 x 50 x 2mm thick SHS handrails welded to 1000mm high 40 x 40 x 2mm thick SHS balusters; spaced at approximately 1000 mm centers; welded at the bottom to flange plate and fixed to concrete staircase treads (m.s); and 40 x 4mm thick flat lower rails; infilled with wrot iron ornaments and patterns as per Architect's details and 900mm high 25 x 25mm solid hammered bar balustrades welded to handrails and lower rails at 150mm centers; all necessary welding and grinding welds smooth; including priming with grey oxide primer before delivery to site and finishing with two coats of gloss oil automotive spray paint to approval.				
A	To staircase	LM	40		
B	ditto but ramp	LM	20		
	TOTAL BALUSTRADING CARRIED TO SUMMARY OF SECTION NO.2				

ELECTRICAL INSTALLATION WORKS

ELECTRICAL WORKS FOR THE PROPOSED CONSTRUCTION OF KAPSABET STADIUM HOSTEL

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	GROUND FLOOR				
	SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-				
	LIGHTING POINTS				
A	i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.	No.	47		
B	Supply and install the following; a) 10A white moulded switch plate as Crabtree, MK or approved equivalent as follows:-				
	i) 10A one gang one way switch	No.	6		
	ii) Sensor based way switch	No.	6		
	iii) 10A Three gang one way switch	No.	1		
C	**LIGHTING FITTINGS**				
i	TYPE 1	No.	27		
ii	TYPE A	No.	1		
iii	TYPE E	No.	5		
iv	TYPE U for Sercurity lighting	No.	14		
v	TYPE 1 EXIT PANEL	No.	2		
D	**POWER AND SOCKET OUTLET POINTS**				
i	13A SP socket points completely wired RING in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.	No.	24		
ii	Socket Outlet plates i) 13A SP twin switched socket outlet	No.	24		
	Total Carried Forward to Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
v	Hand dryer power points completely wired in 3 x 2.5 mm^2 single core PVC insulated copper cables drawn in 20 mm diameter heavy gauge PVC conduits including all accessories, but excluding the 20A DP connection unit	No.	1		
	I) 20A DP switched connection unit with neon indicator as MK or approved equivalent	No.	1		
E	**DATA POINTS**				
i	Telephone/Data outlet point comprising of concealed 20 mm dia. HG PVC conduits with draw wire.	No.	12		
ii	White moulded case dual data/telephone outlet plate as MK, Crabtree or approved equivalent For the item above.	No.	4		
iii	Wireless access points comprising of 20mm Ø HG PVC conduits concealed and complete with a draw wire.	No.	4		
iv	Wi-Fi Access Point ,Ceiling Mount	No.	4		
	POWER RETICULATION AND DISTRIBUTION BOARDS				
F	**Distribution Board and Consumer Unit**				
	i) 4ways TP&N, flush mounted distribution board complete with 100A integral isolator as CRABTREE or approved equivalent complete with all accessories but excluding MCBs.	No.	1		
G	**MCBs for item above as Schneider Electric Acti 9**				
	i)10 A SP MCB	No.	8		
	ii)32 A SP MCB	No.	4		
	iii) 20A DP MCB	No.	2		
	v) Blanking plates	No.	4		
H	**Sub-mains Cabling**				
i	Sub-mains circuits for above DB comprising of 4X 10 mm2 SC PVC copper cables drawn in heavy gauge conduits and running from the LV switchboard to the DB(Actual length to be determined by the P.E)	LM	30		
ii	Cable glands for above cable	Item	1		
iii	Allow for labelling of the Consumer Units and Distribution Boards under this section including all the incoming and outgoing circuits as per the specifications	Item	1		
	TOTAL FOR GROUND FLOOR POWER & LIGHTING SYSTEM C/F COLLECTION PAGE				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	FIRST FLOOR SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-				
	LIGHTING POINTS				
A	i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.	No.	18		
	ii) Ditto as in item No. i) but for two way switching	No.	16		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	No.	3		
B	**Supply and install the following;** a) 10A white moulded switch plate as Crabtree, MK or approved equivalent as follows:-				
	i) 10A one gang one way switch	No.	18		
	ii) 10A one gang two way switch	No.	32		
	iii) Sensor based switch	No.	6		
C	**LIGHTING FITTINGS**				
i	TYPE 1	No.	16		
ii	TYPE A	No.	16		
iii	TYPE E	No.	16		
iv	TYPE 1 EXIT PANEL	No.	3		
D	**POWER AND SOCKET OUTLET POINTS**				
II	13A SP socket points completely wired RING in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.	No.	19		
ii	Socket Outlet plates i) 13A SP twin switched socket outlet	No.	19		
iii	Water heater/shower heater powerpoint wired in 3x2.5mm sq single core cable enclosed and concealed in PVC conduits	No.	16		
iv	20A DP switch for item (iii) above	N.O	16		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
E	**DATA POINTS**				
i	Telephone/Data outlet point comprising of concealed 20 mm dia. HG PVC conduits with draw wire.	No.	16		
ii	White moulded case dual data/telephone outlet plate as MK, Crabtree or approved equivalent For the item above.	No.	16		
	i)4ways TP&N, flush mounted distribution board complete with 100A integral isolator as CRABTREE or approved equivalent complete with all accessories but excluding MCBs.	No.	2		
TOTAL FOR FIRST FLOOR POWER & LIGHTING SYSTEM C/F COLLECTION PAGE					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	SECOND FLOOR SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-				
	LIGHTING POINTS				
A	i) Lighting point completely wired in 3 x 1.5mm^2 single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire.	No.	18		
	ii) Ditto as in item No. i) but for two way switching	No.	16		
	iii) Emergency exit point wiring done using fire resistant 2x1.5mm2 PVC copper cables drawn in 20 mm dia PVC heavy gauge conduits but without the manual call point.	No.	3		
B	**Supply and install the following;** a) 10A white moulded switch plate as Crabtree, MK or approved equivalent as follows:-				
	i) 10A one gang one way switch	No.	18		
	ii)10A one gang two way switch	No.	32		
	iii)Sensor based switch	No.	6		
C	**LIGHTING FITTINGS**				
i	TYPE 1	No.	16		
ii	TYPE A	No.	16		
iii	TYPE E	No.	16		
iv	TYPE 1 EXIT PANEL	No.	3		
D	**POWER AND SOCKET OUTLET POINTS**				
II	13A SP socket points completely wired RING in 3 x 2.5mm^2 single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.	No.	19		
ii	Socket Outlet plates i) 13A SP twin switched socket outlet	No.	19		
iii	Water heater/shower heater powerpoint wired in 3x2.5mm sq single core cable enclosed and concealed in PVC conduits	No.	16		
iv	20A DP switch for item (iii) above	N.O	16		
	Total Carried Forward to the Next Pg.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
	Total B/F from Previous Pg.				
E	**DATA POINTS**				
i	Telephone/Data outlet point comprising of concealed 20 mm dia. HG PVC conduits with draw wire.	No.	19		
ii	White moulded case dual data/telephone outlet plate as MK, Crabtree or approved equivalent For the item above.	No.	19		
	i) 4ways TP&N, flush mounted distribution board complete with 100A integral isolator as CRABTREE or approved equivalent complete with all accessories but excluding MCBs.	No.	2		
	LV SWITCHBOARD				
0.01	Supply, install, test and commission a Free-standing, IP67, purpose made front access lockable main switchboard with 400A TP + N + E busbars manufactured in 12SWG galvanised mild steel sheet and finished in cream (or appropriate colour) powder coating as shown on the schematic (the other details as per Particular Specification), or approved manufacturer complete with the following details:- **a) Incoming** i) 2No. 200A TPN MCCB with Shunt Trip as ABB or approved equivalent. ii) 1No. Voltmeter 0-600V plus selector switch. iii) 1No. Ammeter plus selector switch with C.T.s (600/5) iv) 3No. Phase indicating lights v) 1No. Power factor meter vi) All power system parameters (KW, KVA, KWHr, KVArs, Frequency, P.F., harmonics etc.). The multimeter should be complete with selector switches for viewing/displaying the various parameters. **b) Outgoing** i) 4No. 100A TPN MCCB feeder to the Distribution Boards at Each Floor (Main DB) in as Merlin Gerin or approved equivalent. ii) 1No. 63A TPN MCCB feeder to the Distribution Board for bollards control panel as Merlin Gerin or approved equivalent. iii) 1No. 100A TPN MCCB feeder to the Distribution Board at Pump House as Merlin Gerin or approved equivalent. v) A suitably rated 415V three-phase surge diverter as Furse ESP 415, fully wired, complete with enclosure with viewing window. vi) Space for 3No. TPN MCCBs vii) Space for 2No. SPN MCCBs	1	Item		
0.02	**c)** Carry out comprehensive labeling of all the bus bars. CT chambers, circuit breakers etc. above, indicating the areas served, outgoing cable sizes etc.				
0.03	**d)** Carry out concise load balancing to achieve a maximum imbalance not greater than ± 10% between any two phases, measured at the Main LV switchboard	1	Lot		
	TOTAL FOR Second FLOOR POWER & LIGHTING SYSTEM C/F COLLECTION PAGE				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
J	**Supply, deliver, install and commission a complete Fire Detection and Alarm system, IP addressable type and in accordance with BS 5839**				
i	1 Loop Addressable fire detection and alarm panel complete with 72 hour stand by batteries, zone indicator lights, test and reset buttons and supervisory buzzer as Honeywell or equal and approved equivalent.	No.	1		
ii	Photoelectric Smoke detector point completely wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.	No.	17		
iv	Electronic Sounder and Beacon point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the Sounder and Beacon Unit.	No.	5		
v	Call point completely wired in wired in 3x1.5mm2 heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the call unit.	No.	7		
vi	Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as Honeywell or approved equivalent.	No.	3		
vii	Addressable photoelectric smoke detector as Honeywell or equal and approved.	No.	17		
	Addressable resettable Manual call point unit as MENVIER or approved equivalent .	No.	3		
	TOTAL FOR GROUND 1ST and 2ND FLOOR FIRE ALARM AND DETECTION SYSTEM C/F TO PHASE 1 COLLECTION PAGE				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
2	**SECURITY SYSTEMS.**				
	CCTV CAMERA				
ii	CCTV camera point comprising of wire drawn in Metal Trunking/ 20mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover.	No.	22		
2.01	i) 4 Megapixel Bullet Camera, IR illuminator with range up to 30 m (EXIR 2.0) H.265+/H.265/H.264+/H.264/MJPEG video compression ,3D-DNR, DWDR, BLC video processing functions Access via Hik-Connect app Region of interest (ROI) Mechanically switching IR filter IP67 rating	No.	12		
	ii)Ditto as in item No. i) but for Dome shaped	No.	10		
2.02	20Channel Input/Output Network Video with inbuilt 4 PoE ports c/w recorder, c/w Event trigered recording, External Storage Option,Events Co nfigurations e.g Analytics, Sensors and Motion Detection, Remote access functionalities as Honeywell or equal and approved equivalent complete with the hard disk drivers.	No.	1		
2.03	LED panel display 40",HDMI input, Component video input, composite video input, S-video input, VGA input,VGA output and composite video output.	No.	1		
	TOTAL FOR GROUND 1ST and 2ND FLOOR CCTV SYSTEM C/F TO PHASE 1 COLLECTION PAGE				

ELECTRICAL WORKS FOR THE PROPOSED CONSTRUCTION OF KAPSABET STADIUM HOSTEL

ELECTRICAL INSTALLATIONS BILL OF QUANTITIES

GRAND SUMMARY PAGE

ITEM	DESCRIPTION	AMOUNT (KSHS)
i	**TOTAL FOR GROUND FLOOR POWER & LIGHTING SYSTEM**	
ii	TOTAL FOR FIRST FLOOR POWER & LIGHTING SYSTEM	
iii	TOTAL FOR Second FLOOR POWER & LIGHTING SYSTEM	
iv	TOTAL FOR GROUND 1ST and 2ND FLOOR FIRE ALARM AND DETECTION SYSTEM	
v	TOTAL FOR GROUND 1ST and 2ND FLOOR FIRE ALARM AND DETECTION SYSTEM	
vi	TOTAL FOR GROUND 1ST and 2ND FLOOR CCTV SYSTEM C/F TO PHASE 1 COLLECTION PAGE	
TOTAL FOR ELECTRICAL WORKS FOR THE PROPOSED CONSTRUCTION OF KAPSABET STADIUM HOSTEL		

Amount in Words: Kenya Shillings……

……
……
Official Stamp & Address:……

……
……
Tenderer's Signature:……...Date:……..……...……

Witness' Name:……Witness' Signature:……..……

Address:……..……

Date:……

MECHANICAL INSTALLATION WORKS

Bill no. 1: Sanitary Fittings for (GROUND FLOOR PLAN)					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES *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.* *Note: (i) All sanitary fittings shall be in approved colour.* *(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.* *(iii) Equivalent & Approved models may be acceptable.* ***(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF*** **Wash Hand Basin**				
A	Countertop wash hand basin as DURAVIT D-Code, of nominal size 570 x 425mm, white in colour and in Vitreous China, comprising of 1 center tap hole plate No. WB1761WH, 1 ¼ " waste fitting, 1 ¼ " chrome plated bottle trap. or equal and approved. **Wash hand basin Tap**	2	No.		
B	Chrome plated non-conculsive time delay press action pillar tap as **COBRA** **Mirror**	2	No.		
C	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	2	No.		
	Carried forward to the next page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Brought forward from previous page				
A	**Soap Dispenser** Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Starmix or approved equivalent.	2	No.		
B	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as Medclinic or approved equivalent.	2	No.		
	Total for Ground Floor Sanitary Fittings Installation Works C/F to Summary Page				

Bill No. 2: Plumbing and Drainage					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	INTERNAL PLUMBING				
	All provisional Supply, deliver and install tubing and fittings and described and shown on the drawings. Bidders must allow for jointing , clipping , coupling etc necessary for the proper and satisfactory functioning of the system when pricing				
	The following in PN 20 PPRC conforming to the current European standards for PPR installation and to the Engineers approval, pipe jointing shall be by polyfusion or use of electric coupling				
	Rates must allow for all metal/plastic threaded adopters where required for the connection of sanitary fixtures joints support raceways, isolating , sheaths, elastic materials, expansion arms and bends , crossovers etc				
	Pipe work-PPR PIPES				
A	25mm diameter pipework	99	Lm		
B	32mm diameter pipework	33	Lm		
C	40mm diameter pipework	12	Lm		
	Bends				
D	25mm diameter bend	12	No.		
E	32mm diameter bend	8	No.		
F	40mm diameter bend	2	No.		
	Tees				
G	25mm equal tee	8	No.		
H	32mm equal tee	4	No.		
I	40mm equal tee	2	No.		
	Reducers				
J	32 x 25mm diameter reducer	4	No.		
K	40 x 25mm diameter reducer	4	No.		
L	40 x 32mm diameter reducer	2	No.		
	Male/Female Adapters (Brass threaded)				
M	25mm brass threaded adapter	18	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Flexible Tubing				
A	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	18	No.		
	Threaded Brass Coupling				
B	25mm threaded brass coupling	18	No.		
C	32mm threaded brass coupling	18	No.		
D	40mm threaded brass coupling	6	No.		
	Valves				
E	25mm gate valve	8	No.		
F	32mm gate valve	8	No.		
	Unions				
G	25mm diameter pipe union	16	No.		
H	32mm diameter pipe union	16	No.		
	Pipe Sleeves				
I	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	8	Lm		
	Water connection				
J	Water connection	1	Item		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	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.				
	MuPVC and uPVC Waste and Soil pipework				
A	150mm diameter heavy gauge golden brown UPVC pipe	133	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	105	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	110	Lm		
D	50mm diameter waste pipe	99	Lm		
E	32mm diameter waste pipe	88	Lm		
	Bends				
F	150mm diameter long radius bend	18	No.		
G	100mm diameter long radius bend	18	No.		
H	100mm diameter bend with access	19	No.		
I	100mm diameter sweep bend	16	No.		
J	50mm diameter sweep bend	18	No.		
K	32mm diameter sweep bend	16	No.		
	Tees				
L	150mm diameter sweep tee	18	No.		
M	100mm diameter sweep tee	18	No.		
N	50mm diameter sweep tee	20	No.		
O	32mm diameter sweep tee	26	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Access Caps				
A	150mm diameter access cap	18	No.		
B	100mm diameter access cap	18	No.		
C	50mm diameter access cap	12	No.		
D	32mm diameter access cap	10	No.		
	Boss Connectors				
E	100x50mm diameter boss connector	18	No.		
F	100x40mm diameter boss connector	10	No.		
	WC Connectors				
G	100mm diameter WC connector	16	No.		
	Traps				
H	100 x 50mm diameter floor trap and grating	4	No.		
I	Allow for a standard 300 x 300 x 450mm masonry gully trap complete with concrete cover.	8	No.		
J	Standard 600 x 450 x (600-750)mm inspection chamber complete with heavy duty Cast Iron cover as 'East african Foundry' or approved equivalent.	6	No.		
	Weathering Slates and Vent Cowls				
K	100mm diameter weathering slate and apron.	4	No.		
L	100mm diameter vent cowl	4	No.		
	Total Carried Forward to Collection Page				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page G-12 ……	
2	Total carried forward from page G-13 ……	
3	Total carried forward from page G-14 ……	
4	Total carried forward from page G-15 ……	
	Total for Ground floor internal plumbing and foul drainage C/F to Summary page	

Bill. No. 3: Sanitary Fittings for (FIRST FLOOR PLAN)					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES *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.* *Note: (i) All sanitary fittings shall be in approved colour.* *(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.* *(iii) Equivalent & Approved models may be acceptable.* ***(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF*** **Water Closet (WC) Pan**				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **Duravit D-Code (Horizontal outlet) water** closet or equal and approved. **Water closet Flush Valves**	16	No.		
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	16	No		
	Total carried to collection page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Wash Hand Basin				
A	Countertop wash hand basin as DURAVIT D-Code, of nominal size 570 x 425mm, white in colour and in Vitreous China, comprising of 1 center tap hole plate No. WB1761WH, 1 ¼ " waste fitting, 1 ¼ " chrome plated bottle trap. or equal and approved.	16	No.		
	Wash hand basin Tap				
B	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	16	No.		
	Bathroom Tap				
C	15mm diameter chrome plated back inlet bid tap Cobra ref 107EC CP	16	No.		
	Robe Hook				
D	Chrome plated robe hook mounted with concealed screws. To be as Ideal Standard or equal and approved.	16	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyford or equal and approved	16	No.		
	Mirror				
F	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	16	No.		
	Shower Mixer				
G	Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower mixer as of tapis or approved equivalent for hot and cold water to a 100mm diameter swivel/ adjustable shower rose as tapis or approved equivalent, shower arm ,shower tap and other necessary fittings and accessories. All to be as tapis or equal and approved.	16	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Towel Rail** Chrome plated towel rail 600mm long with the rail and brackets as one piece. To be as GROHE "Atrio Accessories Tier:G5 Prestige" model 40 309" or equal and approved.	16	No.		
B	**Soap Dish** Fully reccesed soap dish as twyford or equal and approved equivalent.	16	No.		
C	**Dhobi Sink** Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting and plug.	1	No.		
D	**Toilet Brush and Holder** Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	16	No.		
E	**Soap Dispenser** Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Starmix or approved equivalent.	16	No.		
F	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as Medclinic or approved equivalent.	1	No.		
	Total Carried Forward to Collection Page				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page G-1 ……	
2	Total carried forward from page G-2 ……	
3	Total carried forward from page G-3 ……	
	Total for 1st Floor Sanitary Fittings Installation Works C/F to Summary Page	

Bill No. 4: Plumbing and Drainage					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	INTERNAL PLUMBING				
	All provisional Supply, deliver and install tubing and fittings and described and shown on the drawings. Bidders must allow for jointing , clipping , coupling etc necessary for the proper and satisfactory functioning of the system when pricing				
	The following in PN 20 PPRC conforming to the current European standards for PPR installation and to the Engineers approval, pipe jointing shall be by polyfusion or use of electric coupling				
	Rates must allow for all metal/plastic threaded adopters where required for the connection of sanitary fixtures joints support raceways, isolating , sheaths, elastic materials, expansion arms and bends , crossovers etc				
	Pipe work-PPR PIPES				
A	25mm diameter pipework	166	Lm		
B	32mm diameter pipework	105	Lm		
C	40mm diameter pipework	22	Lm		
D	50mm diameter pipework	10	Lm		
	Bends				
E	25mm diameter bend	30	No.		
F	32mm diameter bend	20	No.		
G	40mm diameter bend	30	No.		
H	50mm diameter bend	10	No.		
	Tees				
I	25mm equal tee	30	No.		
J	32mm equal tee	20	No.		
K	40mm equal tee	20	No.		
L	50mm equal tee	20	No.		
	Reducers				
O	32 x 25mm diameter reducer	20	No.		
P	40 x 25mm diameter reducer	20	No.		
Q	40 x 32mm diameter reducer	10	No.		
R	50 x 40mm diameter reducer	12	No.		
	Male/Female Adapters (Brass threaded)				
T	25mm brass threaded adapter	26	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Flexible Tubing				
A	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	16	No.		
	Threaded Brass Coupling				
B	25mm threaded brass coupling	20	No.		
C	32mm threaded brass coupling	10	No.		
D	40mm threaded brass coupling	16	No.		
E	50mm threaded brass coupling	8	No.		
	Valves				
F	25mm gate valve	8	No.		
G	32mm gate valve	8	No.		
H	40mm gate valve	2	No.		
	Unions				
J	25mm diameter pipe union	16	No.		
K	32mm diameter pipe union	16	No.		
L	40mm diameter pipe union	8	No.		
	Pipe Sleeves				
O	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	5	Lm		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	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.				
	MuPVC and uPVC Waste and Soil pipework				
A	150mm diameter heavy gauge golden brown UPVC pipe	144	Lm		
A	100mm diameter heavy gauge golden brown UPVC pipe	66	Lm		
B	100mm diameter heavy gauge grey mUPVC pipe	88	Lm		
C	50mm diameter waste pipe	60	Lm		
D	32mm diameter waste pipe	42	Lm		
	Bends				
	150mm diameter long radius bend	8	No.		
E	100mm diameter long radius bend	18	No.		
G	100mm diameter bend with access	16	No.		
H	100mm diameter sweep bend	14	No.		
I	50mm diameter sweep bend	12	No.		
J	32mm diameter sweep bend	10	No.		
	Tees				
	150mm diameter sweep tee	8	No.		
K	100mm diameter sweep tee	16	No.		
L	50mm diameter sweep tee	18	No.		
M	32mm diameter sweep tee	22	No.		
	Access Caps				
	150mm diameter access cap	10	No.		
N	100mm diameter access cap	14	No.		
O	50mm diameter access cap	8	No.		
P	32mm diameter access cap	16	No.		
	Boss Connectors				
	100x50mm diameter boss connector	20	No.		
	100x40mm diameter boss connector	10	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	WC Connectors				
Q	100mm diameter WC connector	12	No.		
	Traps				
R	100 x 50mm diameter floor trap and grating	16	No.		
	Weathering Slates and Vent Cowls				
U	100mm diameter weathering slate and apron.	16	No.		
V	100mm diameter vent cowl	16	No.		
	Total Carried Forward to Collection Page				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page G-12 ……	
2	Total carried forward from page G-13 ……	
	Total carried forward from page G-14	
3	Total carried forward from page G-15 ……	
	Total For 1st Floor Plumbing and Drainage Installation Works C/F to Summary page.	

Bill No. 5: Sanitary Fittings for (SECOND FLOOR PLAN)					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	SANITARY APPLIANCES *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.* *Note: (i) All sanitary fittings shall be in approved colour.* *(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.* *(iii) Equivalent & Approved models may be acceptable.* ***(iv) ALL METAL PARTS OF ALTERNATIVES MUST BE RUST PROOF*** **Water Closet (WC) Pan**				
A	WC pan with 'P'-trap in approved colour complete with horizontal outlet to BS 3402 with heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as **Duravit D-Code (Horizontal outlet) water** closet or equal and approved. **Water closet Flush Valves**	16	No.		
B	32mm water closet flush valve for the above water closets 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 push button type. The fittings shall be as **COBRA** or equal and approved.	16	No		
Total carried to collection page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Wash Hand Basin				
A	Countertop wash hand basin as DURAVIT D-Code, of nominal size 570 x 425mm, white in colour and in Vitreous China, comprising of 1 center tap hole plate No. WB1761WH, 1 ¼ " waste fitting, 1 ¼ " chrome plated bottle trap. or equal and approved.	16	No.		
	Wash hand basin Tap				
B	Chrome plated non-conculsive time delay press action pillar tap as **COBRA**	16	No.		
	Bathroom Tap				
C	15mm diameter chrome plated back inlet bid tap Cobra ref 107EC CP	16	No.		
	Robe Hook				
D	Chrome plated robe hook mounted with concealed screws. To be as Ideal Standard or equal and approved.	16	No.		
	Toilet Roll Holder				
E	Fully recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyford or equal and approved	16	No.		
	Mirror				
F	6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	16	No.		
	Shower Mixer				
G	Concealed shower fitting consisting of 15mm chrome plated riser pipe to connect the concealed three way diverter single lever shower mixer as of tapis or approved equivalent for hot and cold water to a 100mm diameter swivel/ adjustable shower rose as tapis or approved equivalent, shower arm ,shower tap and other necessary fittings and accessories. All to be as tapis or equal and approved.	16	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	**Towel Rail** Chrome plated towel rail 600mm long with the rail and brackets as one piece. To be as GROHE "Atrio Accessories Tier:G5 Prestige" model 40 309" or equal and approved.	16	No.		
B	**Soap Dish** Fully reccesed soap dish as twyford or equal and approved equivalent.	16	No.		
C	**Dhobi Sink** Heavy duty stainless steel sink of size 675 x 485 x 300mm deep in 16 SWG as manufactured by ASL 131or approved equivalent suitable for mounting on counter, complete with 1 No. 15mm diameter chrome plated back inlet bib tap Cobra ref 107EC CP, 40mm diameter chrome plated bottle trap and chain waste fitting and plug.	1	No.		
D	**Toilet Brush and Holder** Wall mounted toilet brush holder and brush of approved colour as GROHE "Atrio accessories Tier:G5 Prestige" Model- 40 314 toilet brush set or approved equivalent.	16	No.		
E	**Soap Dispenser** Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws. Allow for initial soap supply. To be as Starmix or approved equivalent.	16	No.		
F	**Hand Driers** Automatic hand drier in white colour, operating on an infra-red automatic sensing system with heating element safety cut-out complete with a 30 seconds safety timer, plastic rawl plugs and fixing screws. The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm (3.82m3/min) and to be of size 270x264x143mm deep It shall have a noise level below 72.5 dBA at 1.5m. It shall be as Medclinic or approved equivalent.	1	No.		
	Total Carried Forward to Collection Page				

COLLECTION PAGE		
Item	**Description**	**Amount (Kshs)**
1	Total carried forward from page G-1 ……	
2	Total carried forward from page G-2 ……	
3	Total carried forward from page G-3 ……	
	Total for 2nd Floor Sanitary Fittings Installation Works C/F to Summary Page	

Bill No. 6: Plumbing and Drainage					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	INTERNAL PLUMBING				
	All provisional Supply, deliver and install tubing and fittings and described and shown on the drawings. Bidders must allow for jointing , clipping , coupling etc necessary for the proper and satisfactory functioning of the system when pricing				
	The following in PN 20 PPRC conforming to the current European standards for PPR installation and to the Engineers approval, pipe jointing shall be by polyfusion or use of electric coupling				
	Rates must allow for all metal/plastic threaded adopters where required for the connection of sanitary fixtures joints support raceways, isolating , sheaths, elastic materials, expansion arms and bends , crossovers etc				
	Pipe work-PPR PIPES				
A	25mm diameter pipework	125	Lm		
B	32mm diameter pipework	108	Lm		
C	40mm diameter pipework	50	Lm		
D	50mm diameter pipework	8	Lm		
	Bends				
E	25mm diameter bend	22	No.		
F	32mm diameter bend	18	No.		
G	40mm diameter bend	22	No.		
H	50mm diameter bend	2	No.		
	Tees				
I	25mm equal tee	30	No.		
J	32mm equal tee	20	No.		
K	40mm equal tee	12	No.		
L	50mm equal tee	2	No.		
	Reducers				
O	32 x 25mm diameter reducer	20	No.		
P	40 x 25mm diameter reducer	20	No.		
Q	40 x 32mm diameter reducer	8	No.		
R	50 x 40mm diameter reducer	2	No.		
	Male/Female Adapters (Brass threaded)				
T	25mm brass threaded adapter	22	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Flexible Tubing				
A	15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	16	No.		
	Threaded Brass Coupling				
B	25mm threaded brass coupling	16	No.		
C	32mm threaded brass coupling	16	No.		
D	40mm threaded brass coupling	4	No.		
E	50mm threaded brass coupling	2	No.		
	Valves				
F	25mm gate valve	8	No.		
G	32mm gate valve	8	No.		
H	40mm gate valve	2	No.		
	Unions				
I	25mm diameter pipe union	16	No.		
J	32mm diameter pipe union	16	No.		
K	40mm diameter pipe union	8	No.		
	Pipe Sleeves				
O	100mm diameter heavy duty PVC pipe sleeves for crossing over columns and beams.	8	Lm		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	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.				
	MuPVC and uPVC Waste and Soil pipework				
A	150mm diameter heavy gauge golden brown UPVC pipe	144	Lm		
B	100mm diameter heavy gauge golden brown UPVC pipe	105	Lm		
C	100mm diameter heavy gauge grey mUPVC pipe	122	Lm		
D	50mm diameter waste pipe	88	Lm		
E	32mm diameter waste pipe	42	Lm		
	Bends				
F	150mm diameter long radius bend	8	No.		
G	100mm diameter long radius bend	18	No.		
H	100mm diameter bend with access	18	No.		
I	100mm diameter sweep bend	18	No.		
J	50mm diameter sweep bend	22	No.		
K	32mm diameter sweep bend	22	No.		
	Tees				
L	150mm diameter sweep tee	16	No.		
M	100mm diameter sweep tee	16	No.		
N	50mm diameter sweep tee	18	No.		
O	32mm diameter sweep tee	22	No.		
	Access Caps				
P	150mm diameter access cap	16	No.		
Q	100mm diameter access cap	16	No.		
R	50mm diameter access cap	16	No.		
S	32mm diameter access cap	16	No.		
	Boss Connectors				
	100x50mm diameter boss connector	20	No.		
	100x40mm diameter boss connector	16	No.		
	Total Carried Forward to Collection Page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	WC Connectors				
Q	100mm diameter WC connector	16	No.		
	Traps				
R	100 x 50mm diameter floor trap and grating	16	No.		
	Weathering Slates and Vent Cowls				
U	100mm diameter weathering slate and apron.	8	No.		
V	100mm diameter vent cowl	8	No.		
	Total Carried Forward to Collection Page				

COLLECTION PAGE

Item	Description	Amount (Kshs)
1	Total carried forward from page G-12 ……	
2	Total carried forward from page G-13 ……	
3	Total carried forward from page G-14 ……	
	Total For 2nd Floor Plumbing and Drainage Installation Works C/F to Summary page.	

Bill No 7: Water Tanks					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	WATER RETICULATION				
	Excavations				
A	Excavate trench in soil/murram for pipes not exceeding 1000mm deep and average 750mm deep, Part return in, fill and surplus cart away.	40	Lm.		
	HDPE pipes (high density polyethylene pipes)PN12 and fittings				
B	50mm diameter pipe work including joining unions.	60	Lm		
	Bends				
C	50mm diameter bend	8	No.		
	Tees				
D	50mm equal Tee	4	No.		
E	Roof Plastic cylindrical roof water tank, capacity of tank to be 5,000 litres and of preferred diameter 2020mm x 1830mm high, The tank to come complete with tank cover ,mosquito proof inspection vent and rest on wooden platform	3	No.		
F	Set of automatic electrically driven twin water pumps. One duty and the other one standby with automatic changeover, capable of delivering 5 metres per hour against a head of 20 meters. The pumpset shall be complete with 100 litres pressure vessel (as Dayliff pressure set or equal and approved)	1	Set		
G	Associated pipework	1	Item		
H	Valve chamber	1	No		
Total for Water Tanks carried to summary page					

Bill No 8: Fire Protection					
Item	**Description**	**Qty**	**Unit**	**Rate (Kshs)**	**Amount (Kshs)**
	Hose Reel				
A	Swinging type hosereel fitted with 45 metres long, 20 mm diameter reinforced non-kink rubber hose with 5/6 mm lever operated shut-off nozzle, mild steel feed pipe, isolation valve, guide and all other accessories as 'Angus Fire Armour' or equal and approved.	3	No.		
	GMS Pipes				
B	25mm diameter GMS pipework	22	Lm		
C	50mm diameter GMS pipework	50	Lm		
	Extra Over Pipework				
	Bends				
D	25mm diameter bend	12	No.		
E	50mm diameter bend	6	No.		
	Tees				
F	50mm diameter equal Tee	3	No.		
	Reducers				
G	50 x 25 mm diameter reducer	3	No.		
	Valves				
H	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as PEGLER or approved equivalent.	3	No.		
I	50mm diameter ditto	3	No.		
	Unions				
J	25mm diameter pipe unions	8	No.		
K	50mm diameter pipe unions	6	No.		
	Carried forward to the next page				

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Brought forward from previous page				
	Hosereel Pumpset				
A	Hose reel pumpset	1	Set		
	Painting				
B	Allow for painting of the hose reel pipework as per particular specifications.	1	Item		
	Water Fire Extinguisher				
C	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	3	No		
	Carbon Dioxide Gas Fire Extinguisher				
D	9 litres carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	3	No		
	DCP Fire Extinguisher				
E	Dry Chemical Powder fire extinguisher complete with initial charge and mounting brackets.	3	No		
	Manual Bell				
F	Manual Bell	3	No		
	Fire Notices				
G	Allow for fire signage for the hose reel system, fire exits,fire instructions as directed by engineer	3	No		
	Total for Fire Protection carried to summary page				

SUMMARY PAGE		
Item	**Description**	**Amount (Ksh)**
1	Total for Ground Floor Sanitary Fittings Installation Works	
2	Total for Ground Floor Plumbing and Drainage Installation Works	
3	Total for First Floor Sanitary Fittings Installation Works	
4	Total for First Floor Plumbing and Drainage Installation Works	
5	Total for Second Floor Sanitary Fittings Installation Works	
6	Total for Second Floor Plumbing and Drainage Installation Works	
7	Total for Water Tanks Installation Works	
8	Total for Fire Protection Installation Works	
	SUB TOTAL	
9	10% of the sub total above to be used at the discretion of the Engineer	
	Totals for Plumbing and Drainage Installation Works Carried to Form of Tender	

GRAND SUMMARY

S/NO	DESCRIPTION	PAGE NO.	FOR TENDERER USE ONLY	FOR OFFICIAL USE ONLY
	GRAND SUMMARY		KSHS.	KSHS.
1	PRELIMINARIES	P/1		
2	BUILDERS WORK	BW/1		
3	ELECTRICAL INSTALLATION SERVICES	EE/1		
4	MECHANICAL INSTALLATION SERVICES	ME/1		
5	CONTINGENCIES	CS/1		5,000,000.00
	GRAND TOTAL CARRIED TO FORM OF TENDER (VAT INCLUSIVE)			

SIGNED:
(TENDERER'S NAME) ……

Address: ……

Tel No: ……

Date: ……

SIGNED:
(WITNESS'S NAME) ……

Address: ……

Tel No: ……

Date: ……

PART III - THE CONDITIONS OF CONTRACT AND CONTRACT

SECTION VIII - GENERAL CONDITIONS OF CONTRACT (GCC)

[SK]

[Name of Contract]

[Architect Name and Address]

General Conditions of Contract

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1. GENERALPROVISIONS

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" meansthedateofcompletionoftheWorksascertifiedbytheEngineer.

"Contract Price" means the price defined in the contract and there after as adjusted in accordance with the provisions of the Contract.

"Contract" means the agreement entered into between SK and the Contractor as recorded in the Agreement Formand 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, SK's Equipment (if any), Plant, Materials and any other things intended to form or forming partof the Permanent Works.

"Contractor'sPersonnel" 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 timeby the Contractor who acts on behalf of the Contractor.

"Contractor" means the person(s) named as contractor in the Form of Tender accepted by SK.

"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 oraSection(asthecasemaybe) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], whichextendsoverthedaysstated intheSpecialConditionsofContract.

“Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) SK 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 [ApplicationforFinalPaymentCertificate].

“Force Majeure” is defined in Clause19 [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 SK, 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 SK entitled Special Conditions of Contract which constitute Part A of the Special Conditions.

“Party” means SK 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 SK and relating to the construction or operation of the Works.

“SK's Equipment” means the apparatus, machinery and vehicles (if any) made available by the

SK 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 SK.

"SK's Personnel" means the Engineer, the Engineer, the assistants and all other staff, labor and other employees of the Architect and of SK; and any other personnel notified to the Contractor, by SK or the Engineer, as SK'sPersonnel.

"SK" 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 SK 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 SK to act as the Architect for the purposes of the Contract and namedin the Special Conditions of Contract, or other person appointed from time to time by SK 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 SK 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 [SK'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 SK.

"Testson Completion" means the tests which are specified in the Contractor 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 SK.

"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 SK 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

13.1 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, sentor transmitted to the addressf 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 addressfromwhichtherequestwasissued.

13.2 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 ofthe Contract shall be **English.**

1.5 Priority of Documents

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:

a) 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 formannexed 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 SK.

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 SK, 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 SK.Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawings and Bills of Quantities shall be suppliedto 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 SK. Unless otherwise stated in the Contract, the Contractor shall supply to the Architect two copiesof 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.SK'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, theParty 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 SK's Use of Contractor's Documents

1.10.1 Asagreed 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 SK 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.

1.10.3 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) SKfor purposes other than those permitted under Sub-Clause 1.10.2.

1.11 Contractor's Use of SK's Documents

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

1.12 Confidential Details

1.12.1 The Contractor's and SK'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 SK'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) SK shall have obtained (or shall obtain) the planning, zoning, building permitor similar permission for the Permanent Works, and any other permissions described in the Specifications as having been (orto be) obtained by SK; and SK shall indemnify and hold the Contractor harmless against and fromthe 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 SK harmless against and fromthe consequences of any failure to do so, unless the Contractor is impeded to accomplish these actionsand 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 SK for the performance of the Contract;
b) these persons shall notify SK of their leader who shall have authority to bind the Contractor and eachof these persons; and
c) the Contractor shall not alter its composition or legal status without the prior consent of SK.

1.15 Inspections and Audit by SK

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, SK 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 SK if requested by SK. 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 SK's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of in eligibility pursuant to SK's prevailing sanctions procedures).

2 Sports Kenya -SK

2.1 Right of Access to the Site

2.1.1 SK shall give the Contractor right of access to, and possession of, all parts of the Site within thetime (or times) stated in the **Special Conditions of Contract.** The right and possession may not be exclusive to the Contractor. If, under the Contract, SK is required to give (to the Contractor) possession ofanyfoundation, structure, plant or means of access, SK shall do so in the time and manner stated in the Specification. However, SK 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, SK shall give the Contractor right of accessto, 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 SK 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.

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

2.1.5 However, if and to the extent that SK's failure was caused by any error or delay by the Contractor, includingan 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

2.2.1 SK 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 SK's Personnel

SK shall be responsible for ensuring that SK's Personnel and SK'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 SK's Financial Arrangements

SK shall make and maintain all necessary financial arrangements which will enable SK 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 SK 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 SK before exercising a specified authority, the requirements shall be as stated in the S**pecial Conditions of Contract**. SK shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

3.1.4 However, whenever the Architect exercises a specified authority for which SK's approvalis required, then (for the purposes of the Contract) the contractor shall require the Architect toprovideevidence of such approvalbefore complying with the instruction.

3.1.5 Except as otherwise stated in these Conditions:

a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Architect shallbedeemedtoactfortheSK;
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) anyact by the Architect in response to a Contractor's request shall be notified in writing to the Contractor within 14 days of receipt.

3.1.6 The following provisions shall apply:

The Architect shall obtain the specific approval of SK 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-Clause13.4: Specifying the amount payable in each of the applicable three currencies.

3.1.7 Not withstanding 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 forth with comply, despite the absence of approval of SK, 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 toSK.

3.2 Delegation by the Engineer

3.2.1 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].

3.2.2 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

3.3.1 The Architect may issue to the Contractor (at anytime) instructions and additional or modified Drawings which may benecessary 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.

3.3.2 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 Architec tor 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).

3.3.3 Architect or delegated assistant, on any matterrelated to the Contract. Whenever practicable, their instructions shall be given in writing. If the Architec tor 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

3.4 Replacement of the Engineer

If the SK intends to replace the Engineer, SK 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 ofthe 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-Clause3.5 to agree

3.5.2 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 theContract, taking due regard of all relevant circumstances.

3.5.1 The Architect shall give notice to both Parties of each agree mentor 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, ands hall remedy any defects in the Works.

4.1.2 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.

4.1.3 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country.

4.1.4 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 designor specification of the Permanent Works.

4.1.5 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.

4.1.6 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 Architectthe "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the

Specification and in sufficient detail for SK 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

4.2.1 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 SK. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.

4.2.2 The Contractor shall deliver the Performance Security to SK within 30 days after receiving the Notificationof 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 SKin the Special Conditions of Contract, or in another form approved by SK.

4.2.3 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executedand 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.

4.2.4 SK shall not make a claim under the Performance Security, except for amounts to which SK is entitled under the Contract.

4.2.5 SK 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 SK was not entitled to make the claim.

4.2.6 SK shall return the Performance Security to the Contractor within 14 days after receiving a copyof the Taking-Over Certificate.

4.2.7 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

4.3.1 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.**

4.3.2 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 with held 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.

4.3.3 The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint are placement.

4.3.4 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.

4.3.5 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

4.3.6 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.

4.3.7 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreter savailable during all working hours in a number deemed sufficient by the Engineer.

4.4 Sub-contractors

4.4.1 The Contractor shall not subcontract the whole of the Works. The contractor may however subcontract the works as provided in Clause 34.2.

4.4.2 The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if theyweret heacts 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 SK shall be obtained to other proposed Subcontractors;
c) the Contractor shall give SK not less than 14 days' notice of the intended date of the commencementof each Subcontractor's work, and of the commencement of such work on the Site; and
d) each subcontract shall include provisions which would entitle SK to require the subcontract to be assigned to SK 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 SK].

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

4.4.4 Wher epracticable, 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 SK, thenthe Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability toSK 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) SK's Personnel,
b) Any other contractors employed by SK, 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 cause sthe Contractor to suffer delays and/ortoincur 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, SK is required to give to the Contractor possession of any foundation, structure, plantor means of access in accordance with Contractor's Documents, the Contractor shall submit such documentsto 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 Contractor 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 SK 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.

4.73 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an errorin 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 thise.

4.8 Safety Procedures

The Contractor shall:
a) Comply with all applicable safety regulations,
b) Takec are 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 [SK'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 entitledto audit any aspect of the system.

4.9.2 Details of all procedures and compliance documents shall be submitted to the Architectf 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 SK shall have made available to the Contractor for his information, prior to the Base Date, all relevant datain SK's possession on sub-surface and hydrological conditions at the Site, including environmental aspects.SK shall similarly make available to the Contractor all such data which come into SK'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 TheContractor 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 shal ldescribe 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 Contractorwhen submitting the Tender, which shall be made available by the Contractor, but shall not be bound by the Contractor'sinterpretationofanysuchevidence.

4.13 Rights of Way and Facilities

Unless otherwise specified in the Contract SK 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 out side 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 SK or of others.

4.14.2 The Contractor shall indemnify and hold SK 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 be tween 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) SK shall not be responsible for any claims which may arise from the use or otherwise of any access route;

d) SK does not guarantee the suitability or a vailability 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 SK harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from thetransport 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 hall 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 [SK's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to SK.

4.20 SK's Equipment and Free-Issue Materials

4.20.1 SK shall make SK'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) SKs hall be responsible for SK's Equipment, except that

b) the Contractor shall be responsible for each item of SK'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 SK's Equipment shallbe agreed or determined by the Architect in accordance with Sub-Clause 2.5 [SK's Claims] and Sub- Clause3.5 [Determinations]. The Contractor shall pay these amounts to SK.

4.20.2 SK shall supply, free of charge, the “free-issue materials” (if any) in accordance with the details stated in the Specification. SK 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 Architectof any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, SK shall immediately rectify the notified shortage, defector 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 SK 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 [NominatedSubcontractors]),

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 [SK'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 SK's Personnel; and to any other personnel notified to the Contractor, by SK or the Engineer, as authorized personnel of SK's other contractors on the Site.

4.23 Contractor's Operations on Site

4.23.1 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.

4.23.2 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.

4.23.3 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

4.24.1 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 SK. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

4.24.2 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 SK, 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 SK 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 SK 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 hisobligations 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 SK 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 SK may (at his sole discretion) pay, directto 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 SK, the amount which the nominated Subcontractor was directly paid by SK.

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 SK's whose trade or industry is similar to that of theContractor.

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 SK

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst SK'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 SK'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 SK'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 whatever 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 transferof 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 ofthe Works.

6.9.2 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 Sitea n 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 there of 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 employ mentor 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 sin 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 SK'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.

7.3.2 The Contractor shall give SK'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.

7.3.3 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

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

7.4.2 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 placef ort he specified testing of any Plant, Materials and other parts of the Works.

7.4.3 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, not withstanding other provisions of the Contract.

7.4.4 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.

7.4.5 If the Contractor suffers delay and/ or incurs Cost from complying with these instructions or as a result of a delay for which SK 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.

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

7.4.7 The Contractor shall promptly forward to the Architect duly certified reports of the tests. When thespecified tests have be enpassed, 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

7.5.1 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.

7.5.2 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 SK to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [SK's Claims] pay these costs to SK.

7.6 Remedial Work

7.6.1 Not withstanding 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 sub-paragraph (c).

7.6.3 If the Contractor fails to comply with the instruction, SK shall be entitled to employ and pay other personsto 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 [SK's Claims] pay to SK all costs arising from this failure.

7.6.4 If the contractor repeatedly delivers defective work, SK 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 SK at whichever is the earlier of the following times, free from liens and other encumbrances:

a) When it is in corporated 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) thedisposal of material from demolitions and excavations and of other surplus material (whether natural orman-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 shave 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.

8.1.2 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-Clause1 6.2 [Terminationby Contractor].

8.1.3 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 Testson 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 within1 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.

8.3.2 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. SK's Personnel shall be entitled to rely uponthe programme when planning their activities.

8.3.3 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.

8.3.4 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

8.4.1 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 SK, SK's Personnel, or SK'sother contractors.

8.4.2 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 Architec tshall 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

8.6.1 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.

8.6.2 Unless the Architect notifies otherwise, the Contractor shall adopt these revised methods, which mayrequire 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 SK to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [SK's Claims] pay these costs to SK, in addition to delay damages(if any) under Sub-Clause 8.7 below.

8.6.3 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 SK, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

8.7.1 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 [SK's Claims] pay delay damages to SK for this default. These delay damagesshall be the sum stated in the **Special Conditions of Contract**, which shall be paid for everyday which shallelapse 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.

8.7.2 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 SK] 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

8.8.1 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 a gainst any deterioration, loss or damage.

8.8.2 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

8.9.1 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.

8.9.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause3.5 [Determinations] to agree or determine these matters.

8.9.3 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 SK's property in accordance with the Architect instructions.

8.11 ProlongedSuspension

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 receivingf rom the Architec tan 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 SK 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 resultsof these Tests to the Engineer.

9.2 Delayed Tests

9.2.1 If the Tests on Completion are being unduly delayed by SK, Sub-Clause 7.4 [Testing] (fifth paragraph) and/or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

9.2.2 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 Testson such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

9.2.3 If the Contractor fails to carryout the Tests on Completion within the period of 21 days, SK's Personnel may proceed with the Test sat 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 asaccurate.

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

9.4.1 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 SK of substantially the whole benefit of the Works or Section, reject the Worksor Section (as the case may be), in which event SK shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause1 1.4 [Failure to Remedy Defects].

10. SK'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 SK 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
(i) 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 Contract or 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 Contract or, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor out standing 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 undert 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 thel ast day of that period.

10.2 Taking Over of Parts of the Works

10.2.1 The Architect may, at the sole discretion of SK, issue a Taking-Over Certificate for any part of the Permanent Works.

10.2.2 SK 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 SK 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 SK, and

c) if requested by the Contractor, the Architect shall issue a Taking-Over Certificate for this part.

10.2.3 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.

10.2.4 If the Contractor incurs Cost as a result of SK taking over and/or using a part of the Works, other than suchuse as is specified in the Contractor 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 accruedcosts, 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.

10.2.5 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages there after 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

10.3.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which SK is responsible, SK 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.

10.3.2 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.

10.3.3 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.

10.3.4 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) SK onor 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) SK, and Sub-Clause 13.3 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

11.3.1 SK shall be entitled subject to Sub-Clause 2.5 [SK'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 thecase may be, and after taking over) cannot be used for the purposes for which they are intended by reason ofa 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 appl yto any defectsor 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[Costo f Remedying Defects], SK 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 [SK's Claims] pay to SK the costs reasonably incurred by SK in remedying the defect or damage;

(b) Requirethe 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 SK of substantially the whole benefit of the Works or any major partof the Works, terminate the Contractas a whole, or in respect of such major part which cannot be put tothe intended use. Without prejudice to any other rights, under the Contractor otherwise, SK shall thenbe 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 SK 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

Unti lthe 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 SK's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defecton 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 30days after the latest of the expiry dates of the Defects Liability Period, or as soon there after 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 Completionn Certificate shall be issued to SK.

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, SK may sell or otherwise dispose of any remaining items. SK shall be entitled to be paid thecosts 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 SK's costs, the Contractor shall pay the outstanding balance to SK.

12. MEASUREMENT AN 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 Contractorshall 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 agreet her ecords with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

12.1.5 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 paymentofthe 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 workd 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 Clause13 [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: *(corrected tender price– tender price)/ tender price X 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, wouldhavebeen 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 in validate 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 otherc haracteristics 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 SK.

13.2. Variation Order Procedure

13.2.1 Priortoany 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 entitledto be paid:

a) The cost of any partial execution of the Work srendered useless by any such variation,
b) Thecostof 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 financec osts, 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-Clause31.3.

13.3 Value Engineering

13.3.1 TheContractor 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 SK of executing, maintaining or operatingthe Works, (iii) improve the efficiency or value to SK of the completed Works, or
(iv) otherwise be of benefit to SK.

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].

13.2.3 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 behalf (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 SK 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 SK.

13.4 Variation Procedure for Value Engineering proposal

13.4.1 If the Architect requests a proposal, prior to instructing a Variation, the Contractor shall respond in writinga s 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.

13.4.2 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.

13.4.3 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.

13.4.4 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.

13.5 Paymentin 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.

13.6 Provisional Sums

13.6.1 Each Provisional Sum shall only be used, in whole or inpart, in accordance with the Architect instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include onlysuch 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, Materialso r 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.

13.7 Dayworks

13.7.1 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.

13.7.2 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.

13.7.3 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall delive reach 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.

13.7.4 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].

13.8 Adjustments for Changes in Legislation

13.8.1 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.

13.8.2 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.

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

13.8.4 Not withstanding 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 forChanges in Cost].

13.9 Adjustments for Changes in Cost

13.9.1 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.

13.9.2 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 a mounts to cover the contingency of other rises and falls in costs.

13.9.3 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 shall be of the following general type:

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 Im/Io
where:

P is the adjustment factor for the portion of the Contract Price payable.
A and **B** a 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 Ioc 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 currency are added to the Contract Price.

13.9.4 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, itshall 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.

13.9.5 Incases 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.

13.9.6 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.

13.9.7 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 applicableo n 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 SK.

13.9.8 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 in applicable, 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 Clause12 [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 SK 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 statedin the **Special Conditions of Contract.**

14.2.2 Unless and until SK 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 SK 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 SK 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 a dvance 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 SK.

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 SK], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as thec ase may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by SK], except for Sub-Clause 14.2.7 [SK's Entitlement to Termination for Convenience], payable by the Contractor to SK.

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 aform 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 porton the progress during this month in accordance with Sub-Clause4.21 [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 SK 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

14.4.1 I fthe 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.

14.4.2 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

14.5.1 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].

14.5.2 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.

14.5.3 The Architect shall determine and certify each addition if the following conditions a 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 SK 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-Clause14.2 [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 SK has received and approved the Performance Security. Thereafter, the Architect shall, within 30 days after receiving a Statement and supporting documents, deliverto SK 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 Statemen tif 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 SK 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], which ever 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 SK Issues Interim Payment Certificate; or after determination of any disputed amount shown in the Final Statement in accordance with Sub-Clause 16.2 [Terminationby 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 isissued.

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 behalf (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 behalf (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 hall 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-Clause13.8 [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 SK and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money.

14.9.6 SK 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 be comes evident that a dispute exists, the Architect shall deliver to SK (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 SK (with a copyto 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 30days 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 SK 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 SK for all amounts previously paid by SK and for all sums to which SK is entitled, the balance (if any) due from SK to the Contractor or from the Contractor to SK, 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 theContractor 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 SK's Liability

14.14.1 SK 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 SK's liability under his in demnification obligations, or SK's liability in any case of fraud, deliberate default or reckless misconduct by SK.

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) otherpaymentsanddeductions 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 SK by the Contractor shall be made in the currency in which the sum was expended by SK, or in such currency as may be agreed by both Parties;
d) if any amount payable by the Contractor to SK in a particular currency exceeds the sum payable by SK to the Contractor in that currency, SK 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 SK

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 SK

15.2.1 SK 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 SK,

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 theseacts 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.

15.2.2 In any of these events or circumstances, SK may, upon giving 14 days' notice to the Contractor, terminatethe Contract and expel the Contractor from the Site. However, in the case of sub- paragraph (e) or (f) or (g) or (h), SK may by notice terminate the Contract immediately.

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

15.2.4 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.

15.2.5 After termination, SK may complete the Works and/ or arrange for any other entities to do so. SK and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

15.2.6 SK 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 SK, these items may be sold by SK in order to recover this payment. Any balance of the proceeds shall then be paidto the Contractor.

15.3 Valuation at Date of Termination

Assoon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by SK] 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 SK] has taken effect, SK may:

a) Proceed in accordance with Sub-Clause 2.5 [Procurin 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 SK, have been established, and/ or

c) recover from the Contractor any losses and damages incurred by SK and any extra costs of completingthe Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Dateof Termination]. After recovering any such losses, damages and extra costs, SK shall pay any balanceto the Contractor.

15.5 SK's Entitlement to Termination for Convenience

SK shall be entitled to terminate the Contract, at any time at SK'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 SK returns the Performance Security. SK shall not terminate the Contract under this Sub-Clausein 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 SK any gift or consideration of any kindas 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 SK or for showing or for bearing to show favor or disfavor to any person in relation to this or any other contract for SK.

b) Enter into this or any other contract with SK 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 SK.

15.7.2 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 SK, 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 bea nd 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 [Terminationby 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/ori ncurs 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-Clause1 4.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [SK's Claims]),
c) SK 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 performthe Contract,
d) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
e) SK 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].

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

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

16.4 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 [SK'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 PaymentonTermination

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, SK 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 SK, SK'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 what so ever arising outo for 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 actor breach of the Contract by SK, SK'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 SK, SK's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.1.2 SK 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 orbreach of the Contract by SK, SK'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) ofSub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property], unless and to the extent thatany 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 SK. 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 SK.

17.2.2 After responsibility has accordingly passed to SK, 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 Contractorisresponsiblefor their care, from any cause not listed in Sub-Clause 17.3 [SK'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 SK's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of SK'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 SK of any part of the Permanent Works, except as may be specified in the Contract,
f) design of any part of the Works by SK's Personnel or by others for whom SK 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 SK's Risks

17.4.1 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.

17.4.2 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 TimeforCompletion], and
(b) paymentofany such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (e)and (g) of Sub-Clause 17.3 [SK's Risks], Accrued Costs shall be payable.

17.4.3 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

17.5.1 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.

17.5.2 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.

17.5.3 SK shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:
a) An un avoidable result of the Contractor's compliance with the Contract, or
b) A result of any Works be ingused by SK:
   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.

17.5.4 The Contractor shall indemnify and hold SK harmless again stand 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.

17.5.5 IfaPartyisentitledtobeindemnified 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.

17.5.6 For operation and maintenance of any plan to requipment installed, the contractor shall grant a non-exclusive and non-transferable license to SK under the patent, utility models ,or other intellectual rights owned by the contractor or a third party from whom the contract or has received the rights to grant sub-licenses and shall also grant to SK a non-exclusive and non-transferable rights (without the rights to sub-license) to usethe know how and other technical information disclosed to the contract 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 SK.

17.6 Limitation of Liability

17.6.1 Neither Party shall be liable to the other Party for loss of use of anyW orks, 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 SK's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

17.6.2 The total liability of the Contractor to SK, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [SK'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 notso 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 SK's Accommodation/Facilities

17.7.1 The Contractor shall take full responsibility for the care of SK provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessationof 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 SK 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 SK. 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 SK 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 SK shall act for SK's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealingswith the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

18.1.5 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.

18.1.6 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].

18.1.7 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.

18.1.8 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.

18.1.9 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 SK, under the other terms of the Contractor otherwise. Any amounts not insured or not recovered from the insurers shallbe borne by the Contractor and/or SK.

18.1.12 SK in accordance with these obligations, liabilitieso r responsibilities. However, if the insuring Party failsto 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 coveragerelevant 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 [SK'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 sand 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) Shal lbe 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 [SK'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 SK of another part ofthe Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h)of Sub-Clause 17.3[SK'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,t his 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) apart of the Works which is lost or damaged inorder 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) apart of the Works which has been taken over by SK, 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 SK, with supporting particulars. SK shall then (i) be entitled subject to Sub-Clause 2.5 [SK's Claims] to paymentof an amount equivalent to such commercially reasonable terms asthe 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

18.3.1 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 Worksand 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.

18.3.2 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.

18.3.3 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 SK'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) SK'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 [SK's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

18.4.1 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.

18.4.2 The insurance shall cover SK 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 Contractoror any othe rof 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 SK or of SK's Personnel.

18.4.3 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 over come, and
d) which is not substantially attributable to the other Party.

19.1.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, s olong 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 lock out by persons other than the Contractor's Personnel,
d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as maybeattributabletotheContractor'suseofsuchmunitions, explosives, radiation or radio-activity, and
e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

19.2.1 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.

19.2.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

19.2.3 Not withstanding 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-Clause18.2 [Insurance for Works and Contractor's Equipment].

19.4.2 After receiving this notice, the Architect shall proceed in a ccordance 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) theamountspayableforanyworkcarriedoutforwhichapriceisstatedintheContract;

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) SK when paid for by SK, and the Contractor shall place the same at SK'sdisposal;

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

Not withstanding 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 Partyofsucheventorcircumstance:

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 SK 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 SK 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 TheContractorshallkeepsuch contemporary records as may be necessary to substantiate any claim, either on the Site or at an other location acceptable to the Engineer. Without admitting SK'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 42days 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 eventor 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.

20.1.8 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.

20.1.9 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 SK's Claims

20.2.1 If SK considers itself to be entitled to any payment under any Clause of these Conditionsor otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, SK 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 [SK'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 afte rSK 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 SK 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 SK is entitled to be paid by the Contractor, and/ or (ii) the extension (if any) ofthe 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. SK shall onlybe 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 arbitrationa fter 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 SK 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 Not withstanding 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 a ward 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 Thetermsofthere muneration 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 Contractis with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws ofKenya. 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-Clause1.4 [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 Failureto Comply with Arbitrator's Decision

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

20.9.2 In the even tthat 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 SK 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.

Part A - Contract Data

Conditions	Sub-Clause	Data
Procuring Entity's name and address	Heading	SPORTS KENYA
Name and Reference No. of the Contract	Heading and 3.1.1	The Proposed Rehabilitation and Upgrading of Kipchoge Keino Stadium, Eldoret to FIFA/CAF Standard
Engineers Name and address	Heading and 3.1.1	*Insert*
Contractor's Representative's name	4.3.1	*[insert the name of the Contractor's Representative agreed by the Procuring Entity prior to Contract signature]*
Key Personnel names	16.91	*[insert the name of each Key Personnel agreed by the Procuring Entity prior to Contract signature]*
Time for Completion	1.1.	_____ days *If Sections are to be used, refer to Table: Summary of Sections below*
Defects Notification Period	1.1	_____ days
Sections	1.1	*If Sections are to be used, refer to Table: Summary of Sections below*
Electronic transmission systems	1 .3	
Time for the Parties entering into a Contract Agreement	1 .6	Within 30days
Commencement Date	8.1.1	
Time for access to the Site	21	No later than the Commencement Date, and not later than _____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____% shall require approval of the Procuring Entity.
Performance Security	4.2.1	The performance security will be in the form of a ____ *[insert either one of "demand guarantee" or "performance bond"]* in the amount(s) of *[insert related figure(s)]* percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.
Normal working hours	6.5	Specify
Delay damages for the Works	8.7 & 14.15(b)	_____ % of the Contract Price per day. *If Sections are to be used, refer to Table: Summary of Sections below*
Maximum amount of delay damages	8.7	_____% of the final Contract Price.

Provisional Sums	13.5. (b)(ii)	*[If there are Provisional Sums, insert a percentage for adjustment of Provisional Sums}* --- %
Adjustments for Changes in Cost	13.8	Period "n" applicable to the adjustment multiplier "Po": _____*[Insert the period if differentfrom one (1) month;if period "n" is one (1) month, insert "not applicable"}*
Total advance payment	14.2.1	% Percentage of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable *[Insert number and timing of installment sif applicable]*
Repayment amortization rate of advance payment	14.2.5 (b)	--- %
Percentage of Retention	14.3.2 (c)	--- %
Limit of Retention Money	14.3.2 (c)	____ % 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 _____*[list].*
	14.5(c)(i)	PlantandMaterialsforpaymentwhendeliveredto theSite _____*[list].*
Minimum Amount of Interim Payment Certificates	14.6	% oftheAcceptedContract Amount.
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	Specify_____% ratepermonthofdelayed payment.
Maximum total liability of the Contractor to SK	17.6	*[Select one of the two options below as appropriate}* Theproductof_____*[insert a multiplier less or greater than one}* times the Accepted Contract Amount, *or* __ __ __ __ __ __*[insertamountofthemaximumtotal liability]*
Periods for submission of isurance: a. evidence of insurance. b. Relevant policies	18.1	*[Insert period for submission of evidence of insurance and policy. Period may be from 14 days to 30 days.}* days ___ days
Maximum amount of deductibles for insurance of SK's risks	18.2.4 (d)	*[Insert maximum amount of deductibles}*
Minimum amount of third-party msurance	18.3	*[Insert amount of third-party insurance}*

The place of arbitration	20.7.2	*Insert city and Country*

SECTION X - CONTRACT FORMS

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM No. 2 - NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE

FORM No. 3 - CONTRACT AGREEMENT

FORM No. 4 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]

FORM No. 5- PERFORMANCE SECURITY [Option 2– Performance Bond]

FORM No. 6 - ADVANCE PAYMENT SECURITY

FORM No. 7 - 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)* SK: *[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) OtherTenderers

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 SK*]
   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 receip tof 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 SK*]
   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 a vailable 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 SK:

Signature:_____

Name:_____

Title/position:_____

_____

Telephone:_____

FORM NO 2: LETTER OF AWARD

[letterhead paper of SK]

[date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amoun tin numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is here by accepted by ..... *(name of SK)*.

You are requested to furnish the Performance Security within in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of SK: .....

Attachment: *Contract Agreement:* .....

FORM NO 3: CONTRACTAGREEMENT

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 SK desires that the Worksknownas_____should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Worksand the remedying of any defects there in,

SK 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) theNotification 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 SK to the Contractor as specified in this Agreement, the Contractor here by covenants with SK to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. SK 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.

   INWITNESS 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.

   Signeda nd sealed by_____(for SK)

   Signed and sealed by_____(for the Contractor).

FORM NO. 4 - PERFORMANCE SECURITY

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: *[insert name and Address of SK]*

Date: _____*[Insert date of issue]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informedthat_____(hereinafter called "the Contractor") has entered into Contract No._____dated_____with (*name of SK*)_____(SK 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. Atthe 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 it self 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],* inresponse tot he 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. SK should note that in the event of an extension of this date for completion of the Contract, SK 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. 5- PERFORMANCE SECURITY

[Option 2– Performance Bond]

*[**Note:** Procuring Entities a readvised to use Performance Security – Unconditiona lDemand Bank Guarantee in stead of Performance Bond due to difficulties involved in calling Bond holder to action]*

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insertnameandAddressof*ProcuringEntity*]*

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 Principal (hereinafter called "the Contractor") and _____] as Surety (hereinafter called "the Surety"),are held and firmly bound unto_] as Obligee (hereinafter called "SK") 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 SK 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 SK to be,in default under the Contract, SK having performed SK'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 SK for completing the Contract in accordance with its terms and conditions, and upon determination by SK and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and SK and make a vailable 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 SK to Contractor under the Contract, less the amount properly paid by SK to Contractor; or

   c) Pay SK the amount required by SK to complete the Contract in accordance with its terms and conditionsupto 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 SK named here in or the heirs, executors, administrators, successors, and assigns of SK.

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_____

Inthepresenceof_____

SIGNED ON_____on behalf of_____

By_____in the capacity of_____

Inthepresence of_____

FORM NO. 6 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]
[Guarantor letterhead]
Beneficiary:_____*[Insert name and Address of* ProcuringEntity*]*
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, oronthe_____dayof_____,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.*

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[1]The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance paymen tas specified in the Contract.
[2]Insert the expected expiration date of the Time for Completion. SK should note that in the event of an extension of the time for completion of the Contract, SK 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. 7 – RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: *[Insert name and Address of* SK*]*

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 executionof *[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 upported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifyingthedemand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or showgrounds 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 ofApplicant's bank]*.

5. 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.

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.*

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*

[2] *Insert a date that is twenty-eight days after the expiry of retention period after the actua lcompletion date of the contract. SK should note that in the event of an extension of this date for completion of the Contract, SK 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.*