



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

OPEN NATIONAL TENDER

**FOR CONSTRUCTION OF AN INTAKE WEIR ALONG RIVER NARUMORU
IN THOME, LAIKIPIA COUNTY.**

TENDER REF. NO. NEMA/T/022/2022-2023.

**ISSUED ON 29TH NOVEMBER, 2022.
CLOSING ON 14TH DECEMBER, 2022 AT 11:00 AM.**

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INVITATION TO TENDER

PROCURING ENTITY: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

**CONTRACT NAME AND DESCRIPTION: CONSTRUCTION OF AN INTAKE WEIR
ALONG RIVER NARUMORO IN THOME, LAIKIPIA COUNTY.**

1. The National Environment Management Authority (NEMA) invites sealed tenders for the construction of an Intake Weir along River Narumoro in Thome, Laikipia County.
2. Tendering will be conducted under open competitive method National using a standardized tender document. Tendering is open to all qualified and interested Tenderers.
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours i.e. 0900 to 1500 hours at the address given below.
4. A complete set of tender documents should be obtained by interested tenderers electronically from the Websites www.nema.go.ke and www.tenders.go.ke free of charge.
5. Tenders shall be quoted be in Kenya Shillings and shall include all taxes. Tenders shall remain valid for **119 days** from the date of opening of tenders.
6. All Tenders must be accompanied by a **Tender Security of One Hundred Thousand (100,000) Kenyan Shillings Only valid for 149 days.**
7. The Tenderer shall chronologically serialize all pages of the tender documents submitted.
8. Completed tenders must be delivered to the address below on or before **14th December 2022, at 11:00 AM**. Electronic Tenders **will not** be permitted.
9. 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 below.
10. Late tenders will be rejected.
10. The addresses referred to above are:

A. **Address for obtaining further information on tender documents**

National Environment Management Authority (NEMA)

Popo Road, South C, off Mombasa Road

P.O.BOX: 67839-00200, Nairobi.

020-2101370-ext 179

Procurement@nema.go.ke/nemaprocurement627@go.ke

B. Address for Submission of Tenders.

National Environment Management Authority (NEMA)
P.O.BOX: 67839-00200, Nairobi.
Popo Road, South C, off Mombasa Road
Tender Box or Supply Chain Management Office Room G16 in the Main
Administration Building (Block A).

C. Address for Opening of Tenders.

National Environment Management Authority (NEMA)
P.O.BOX: 67839-00200, Nairobi.
Popo Road, South C, off Mombasa Road
Main Administration Building (Block A)

Authorized Official

The Director General

National Environment Management Authority (NEMA)

Signature.....

Date.....

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. Scope of Tender

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

2. Fraud and Corruption

- 2.1 The Procuring Entity 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 The Procuring Entity 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 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, the Procuring Entity shall indicate in the **Data Sheet** and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.
- 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 being tendered for. The Procuring Entity shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

3. Eligible Tenderers

- 3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. Public employees and their close relatives (*spouses, children, brothers, sisters and uncles and aunts*) are not eligible to participate in the tender. 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. The maximum number of JV members shall be specified in the **TDS**.
- 3.2 Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and

firms/organizations in which they have a substantial 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 another tenderer; or
- b) Receives or has received any direct or indirect subsidy from another tenderer; or
- c) Has the same legal representative as another tenderer; or
- d) 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 Procuring Entity regarding this tendering process; or
- e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender; or
- f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer for the Contract implementation; or
- 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 or
- h) Has a close business or family relationship with a professional staff of the Procuring Entity who:
 - 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) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.

3.4 A tenderer shall not be involved in corrupt, coercive, obstructive, collusive or fraudulent practice. A tenderer that is proven to have been involved 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. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender. 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.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8. A Tenderer 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 subcontractors or sub-consultants for any part of the Contract including related Services.

3.7 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 PPRÁ www.ppra.go.ke.

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state 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 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (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 the Procuring Entity, as the Procuring Entity shall reasonably request.

3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts and labor) from national 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 the Procuring Entity determine if this condition is met shall be provided in for this purpose is be provided in “*SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9*”.

3.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. 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

3.14 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority.

4. 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 eligible under ITT 3.9. At the Procuring Entity'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. Tenderer's Responsibilities

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

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

5.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the 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. 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 8.

PART 1 Tendering Procedures

- i) Section I - Instructions to Tenderers (ITT)
- ii) Section II - Tender Data Sheet (TDS)
- iii) Section III - Evaluation and Qualification Criteria
- iv) Section IV - Tendering Forms

PART 2 Works Requirements

- i) Section V - Drawings
- ii) Section VI - Specifications
- iii) Section VII - Bills of Quantities

PART 3 Conditions of Contract and Contract Forms

- i) Section VIII - General Conditions of Contract (GCC)
- ii) Section IX - Special Conditions of Contract (SC)
- iii) Section X - Contract Forms

6.2 The Invitation to Tender Document (ITT) issued by the Procuring Entity is not part of the Contract documents.

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with

ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

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. Site Visit

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Required Services and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

8. Pre-Tender Meeting

8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender meeting will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender site visit will be held and when. The Tenderer's designated representative is invited to attend a pre-arranged pretender visit of the site of the works. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

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

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, 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 in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

8.4 The Procuring Entity shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

9. Clarification and amendments of Tender Documents

9.1 A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting and the pre-arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS** prior to the deadline for submission of tenders. The Procuring Entity shall forward copies of its response to all tenderers who have acquired the Tender Documents in accordance with ITT 6.3, including a description of the inquiry but without identifying its source. If specified in the **TDS**, the Procuring Entity 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, the Procuring Entity shall amend the Tender Documents appropriately following the procedure under ITT 8.4.

10. Amendment of Tendering Document

10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may

amend the Tendering document by issuing addenda.

10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Procuring Entity in accordance with ITT 6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.

10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below.

C. Preparation of Tenders

11. Cost of Tendering

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

12. Language of Tender

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

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

- a) Form of Tender prepared in accordance with ITT 14;
- b) Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
- c) Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
- d) Alternative Tender, if permissible, in accordance with ITT 15;
- e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
- f) Qualifications: documentary evidence in accordance with ITT 19 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
- g) Conformity: a technical proposal in accordance with ITT 18;
- h) Any other document required in the **TDS**.

13.2 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 Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

13.3 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.

14. Form of Tender and Schedules

14.1 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.

15. Alternative Tenders

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

15.2 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.

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, 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 the Procuring Entity. 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.

16. Tender Prices and Discounts

16.1 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.

16.2 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 the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.

16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.

16.5 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 the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.

16.6 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 16.4, provided the Tenders for all lots (contracts) are opened at the same time.

16.7 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.

17. Currencies of Tender and Payment

17.1 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 Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

18. Documents Comprising the Technical Proposal

18.1 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, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

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

19.2 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.

19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

19.4 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 the Procuring Entity, a contractor or group of contractors qualifies for a margin of preference. Further the information will enable the Procuring Entity 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.

19.5 The purpose of the information described in ITT 19.4 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 the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

19.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.3. 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.

19.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. 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 the Procuring Entity.

19.8 If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the Procuring Entity 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.

19.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (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 be disqualified from the procurement process,
- ii) if the contract has been awarded to that tenderer, the contract award will be set aside,
- iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 6.7 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring Entity 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 tenderer.

20. Period of Validity of Tenders

20.1 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 the Procuring Entity in accordance with ITT 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or

permitted to modify its Tender, except as provided in ITT 20.3.

20.3 If the award is delayed by a period exceeding the number of days to be specified in the **TDS** days beyond the expiry of the initial tender validity period, the Contract price shall be determined as follows:

- a) in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**;
- b) in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

21. Tender Security

21.1 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.

21.2 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:

- a) an unconditional Bank Guarantee issued by reputable commercial bank); or
- b) an irrevocable letter of credit;
- c) a Banker's cheque issued by a reputable commercial bank; or
- d) another security specified **in the TDS**,

21.3 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 20.2.

21.4 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 the Procuring Entity as non-responsive.

21.5 If a Tender Security is specified pursuant to ITT 21.1, 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**. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined nonresponsive or a bidder declines to extend tender validity period.

21.6 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**.

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

- e) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension thereto provided by the Tenderer; or
- f) if the successful Tenderer fails to:
 - i) sign the Contract in accordance with ITT 50; or
 - ii) furnish a Performance Security and if required in the **TDS**, and any other documents required in the **TDS**.

21.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to

the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.

21.9 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.

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

22. Format and Signing of Tender

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number specified in the **TDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2 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.

22.3 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 as specified 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.

22.4 In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

22.5 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

23. Sealing and Marking of Tenders

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package or container. The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:

- a) in an envelope or package or container marked "ORIGINAL", all documents comprising the Tender, as described in ITT 11; and
- b) in an envelope or package or container marked "COPIES", all required copies of the Tender; and
- c) if alternative Tenders are permitted in accordance with ITT 15, and if relevant:
 - i) in an envelope or package or container marked "ORIGINAL –ALTERNATIVE"

- TENDER”, the alternative Tender; and
- ii) in the envelope or package or container marked “COPIES- ALTERNATIVE TENDER”, all required copies of the alternative Tender.

The inner envelopes or packages or containers shall:

- a) bear the name and address of the Procuring Entity.
- b) bear the name and address of the Tenderer; and
- c) bear the name and Reference number of the Tender.

23.2 If an envelope or package or container is not sealed and marked as required, the *Procuring Entity* will assume no responsibility for the misplacement or premature opening of the Tender. Tenders that are misplaced or opened prematurely will not be accepted.

24. Deadline for Submission of Tenders

24.1 Tenders must be received by the Procuring Entity at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**. When so specified in the **TDS**, Tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the **TDS**.

24.2 The Procuring Entity 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 the Procuring Entity and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

25. Late Tenders

25.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

26. Withdrawal, Substitution, and Modification of Tenders

26.1 A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 22.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

- a) prepared and submitted in accordance with ITT 22 and ITT 23 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
- b) received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 24.

26.2 Tenders requested to be withdrawn in accordance with ITT 26.1 shall be returned unopened to the Tenderers.

26.3 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.

27. Tender Opening

- 27.1 Except in the cases specified in ITT 23 and ITT 26.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the **TDS**, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 24.1, shall be as specified in the **TDS**.
- 27.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened, but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.
- 27.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.
- 27.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.
- 27.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.
- 27.6 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 Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the **TDS**.
- 27.7 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 25.1).
- 27.8 The Procuring **Entity 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 one was required.
 - e) number of pages of each tender document submitted.
- 27.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers upon request.

E. Evaluation and Comparison of Tenders

28. Confidentiality

28.1 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 46.

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

28.3 Notwithstanding ITT 28.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Procuring Entity on any **matter related to the tendering process, it shall do so in writing.**

29. Clarification of Tenders

29.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity 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 by the Procuring Entity shall not be considered. The Procuring Entity'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 the Procuring Entity in the evaluation of the tenders, in accordance with ITT 33.

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

30. Deviations, Reservations, and Omissions

30.1 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.

31. Determination of Responsiveness

31.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 13.

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

31.3 The Procuring Entity shall examine the technical aspects of the tender submitted in

accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

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

32. Non-material Non-conformities

32.1 Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.

32.2 Provided that a Tender is substantially responsive, the Procuring Entity may request that the tenderer submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial 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.

32.3 Provided that a tender is substantially responsive, the Procuring Entity shall rectify quantifiable nonmaterial 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**.

33. Arithmetical Errors

33.1 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.

33.2 Provided that the Tender is substantially responsive, the Procuring Entity 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, and 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

33.3 Tenderers shall be notified of any error detected in their bid during the notification of a ward.

34. Currency provisions

34.1 Tenders will priced be in Kenya Shillings only. Tenderers quoting in currencies other than in Kenya shillings will be determined non-responsive and rejected.

35. Margin of Preference and Reservations

35.1 No margin of preference shall be allowed on contracts for small works.

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, youth and/or persons living with disability, who are appropriately registered as such by the authority to be specified in the **TDS**, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses/firms belonging to those specified groups are the only ones eligible to tender. Otherwise if no so stated, the invitation will be open to all tenderers.

36. Nominated Subcontractors

- 36.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.
- 36.2 Tenderers may propose subcontracting 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.
- 36.3 The 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 by the Procuring Entity in the **TDS** as can 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.

37. Evaluation of Tenders

- 37.1 The Procuring Entity 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 the Procuring Entity shall determine the Best Evaluated Tender in accordance with ITT 40.
- 37.2 To evaluate a Tender, the Procuring Entity shall consider the following:
- a) price adjustment due to discounts offered in accordance with ITT 16;
 - b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 39;
 - c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
 - d) any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.
- 37.3 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.
- 37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.**

38. Comparison of Tenders

- 38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 38.2 to determine the Tender that has the lowest evaluated cost.

39. Abnormally Low Tenders

- 39.1 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.
- 39.2 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed

methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

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

40. Abnormally High Tenders

40.1 An abnormally high price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) 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.

40.2 In case of an abnormally high tender price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of 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. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:

- i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.
- ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity 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.

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

41. Unbalanced and/or Front-Loaded Tenders

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity 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.

41.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:

- a) accept the Tender; or
- 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; or
- c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
- d) reject the Tender,

42. Qualifications of the Tenderer

42.1 The Procuring Entity 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.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. 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 Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

42.3 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 the Procuring Entity 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.

42.4 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.

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

42.6 After evaluation of the price analyses, if the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

43. Best Evaluated Tender

43.1 Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Best Evaluated Tender. The Best 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.

44. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders.

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

F. Award of Contract

45. Award Criteria

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

46. Notice of Intention to enter into a Contract

46.1 Upon award of the contract and Prior to the expiry of the Tender Validity Period the

Procuring Entity shall issue a Notification of Intention to Enter into a Contract / Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;
- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (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 standstill period;

47. Standstill Period

47.1 The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.

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

48. Debriefing by the Procuring Entity

48.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 46, an unsuccessful tenderer may make a written request to the Procuring Entity for a debriefing on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.

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

49. Letter of Award

49.1 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 within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

50. Signing of Contract

50.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.

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

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

51. Appointment of Adjudicator

51.1 The Procuring Entity proposes the person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus reimbursable expenses. If

the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Performance Security

52.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 40.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.

52.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS**, or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.

52.3 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.

53. Publication of Procurement Contract

53.1 Within fourteen days after signing the contract, the Procuring Entity 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 the Procuring Entity;
- 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 read out at Tender opening.

54. Procurement Related Complaints and Administrative Review

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

54.2 A request for administrative review shall be made in the form provided under contract forms.

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.

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	A. General
ITT 1.1	<p>The name of the contract is: CONSTRUCTION OF AN INTAKE WEIR ALONG RIVER NARUMORO IN THOME, LAIKIPIA COUNTY.</p> <p>The reference number of the Contract is: NEMA/T/022/2022-2023</p> <p>The number and identification of lots (contracts) comprising this Tender are: One (1) i.e. CONSTRUCTION OF AN INTAKE WEIR ALONG RIVER NARUMORO IN THOME, LAIKIPIA COUNTY.</p>
ITT 2.3	<p>The Information made available on competing firms is as follows:</p> <hr/> <p>N/A</p>
ITT 2.4	<p>The firms that provided consulting services for the contract being tendered for are: None</p>
ITT 3.1	<p>Maximum number of members in the Joint Venture (JV) shall be:</p> <p>N/A</p>
B. Contents of Tender Document	
8.1	<p>(A) Pre-Tender conference and pre-arranged pretender visit shall take place at the following date, time and place:</p> <p>Date: 7th December 2022</p> <p>Time: 1:00PM</p> <p>Place: Meeting point at Narumoru Police Station junction at 1.00 PM.</p> <p>Contact No.0725993761</p> <p>Nonattendance at the pre- Tender meeting and pretender site visit will not be a cause for disqualification of a Tenderer.</p>
ITT 8.2	<p>The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 6th December 2022 at 11:00AM</p>
ITT 8.4	<p>The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published is www.nema.go.ke</p>
ITT 9.1	<p>For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is:</p> <p>National Environment Management Authority (NEMA)</p>

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	Popo Road, South C, off Mombasa Road P.O.BOX: 67839-00200, Nairobi. Tel.: 020-2101370 Procurement@nema.go.ke/nemaprocurement627@go.ke
C. Preparation of Tenders	
ITP 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: As Indicated In The Evaluation Criteria and Qualification Form Summary
ITT 15.1	Alternative Tenders shall not be considered.
ITT 15.2	Alternative times for completion shall not be permitted.
ITT 15.4	Alternative technical solutions shall be permitted for the following parts of the Works: N/A
ITT 16.5	The prices quoted by the Tenderer shall be: Fixed
ITT 20.1	The Tender validity period shall be 119 days .
ITT 20.3 (a)	The adjustment shall be based on the AVERAGE price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.
ITT 21.1	A Tender Security of One Hundred Thousand (100,000) Kenyan Shillings valid for 149 days shall be required .
ITT 21.2 (d)	The other Tender Security shall be: N/A
ITT 21.5	On the Performance Security, other documents required shall be: BENEFICIAL OWNERSHIP DISCLOSURE FORM
ITT 22.1	In addition to the original of the Tender, the number of copies is: Three (3) i.e. One Original In Paper Format, One Copy In Paper Format and a Soft Copy in PDF in a Readable & Labelled Flash Disc .
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: A Written Power of Attorney Duly Witnessed by a Commissioner of Oaths
D. Submission and Opening of Tenders	
ITT 24.1	For Tender submission purposes only, the Procuring Entity's address is: Director General, National Environment Management Authority, P.O.BOX: 67839-00200, Nairobi. Popo Road, South C, off Mombasa Road Tender Box or Supply Chain Management Office Room G16 in the Main Administration Building (Block A).

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<p>Date and time for submission of Tenders: 14th December 2022, at 11:00AM</p> <p>Tenders shall shall not submit tenders electronically.</p>
ITT 27.1	<p>The Tender opening shall take place at the time and the address for Opening of Tenders provided below:</p> <p>Physical Address: Popo Road, South C, off Mombasa Road; Main Administration Building (Block A)</p> <p>State date and time of tender opening: 14th December 2022, at 11:00AM</p>
ITT 27.1	<p>If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures specified below: N/A</p>
ITT 27.6	<p>The number of representatives of the Procuring Entity to sign is: Three (3) appointed members of the Ad Hoc Tender Opening Committee.</p>
E. Evaluation, and Comparison of Tenders	
ITT 32.3	<p>The adjustment shall be based on the AVERAGE price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.</p>
ITT 35.2	<p>The invitation to tender is extended to the following groups that qualify for Reservations: The invitation will be open to all tenderers.</p>
ITT 36.1	<p>At this time, the Procuring Entity does not intend to execute certain specific parts of the Works by subcontractors selected in advance.</p>
ITT 36.2	<p>Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: 10% of the total contract amount. Tenderers planning to subcontract more than 10% of total volume of work shall specify, in the Form of Tender, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience.</p>
ITT 36.3	N/A
ITT 37.2 (d)	<p>Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.</p>
ITT 51.1	<p>The person named to be appointed as Adjudicator is: As may be determined and agreed with the contractor.</p>
ITT 52.2	<p>Other documents required are: BENEFICIAL OWNERSHIP DISCLOSURE FORM</p>
ITT 54.1	<p>The procedures for making a Procurement-related Complaints are detailed in the "Regulations" available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke. If a</p>

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<p>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:</p> <p>For the attention: DIRECTOR GENERAL</p> <p>Procuring Entity: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY</p> <p>Email address: dgnema@nema.go.ke</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <ul style="list-style-type: none">(i) the terms of the Tender Documents; and(ii) the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

STAGE I: PRELIMINARY EXAMINATION FOR DETERMINATION OF RESPONSIVENESS

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria (including requirements in the qualification forms, tenderer's eligibility-confidential business questionnaire) and other requirements in the ITT and that the tender is complete in all aspects in meeting the requirements of "Part 2 - Procuring Entity's Requirements", including checking for tenders with unacceptable errors, abnormally low tenders, and abnormally high tenders. Tenders that do not pass the Preliminary Examination will not be considered further.

Evaluation

The following criteria will be used to determine preliminary responsiveness of the bidders.

PRELIMINARY REQUIREMENTS (MANDATORY)

No	Mandatory eligibility criteria by the tenderer
1.	Bidders and their associated firms who have existing on-going contracts with NEMA which have delayed beyond the original scheduled completion period in the contract without proper justification or who according to NEMA records, have failed in performance of previous contracts or have had their previous contracts terminated for non-performance are not eligible to participate.
2.	Tenderer shall chronologically serialize all pages of the tender documents submitted including the attachments. Where the pages are printed both sides, each side should be serialized chronologically.
3.	The bidder shall provide Three (3) copies of the tender document i.e. One Original In Paper Format, One Copy In Paper Format and a Soft Copy in PDF in a Readable & Labelled Flash Disc.
4.	The tender is signed by the person holding a valid power of attorney, without material deviation, reservation or omission. Attach a copy of letter granting power of attorney signed by a commissioner of oaths.
5.	Duly filled, signed and stamped Confidential Business Questionnaire indicating all the directors and their shareholding.
6.	Attach copy of registration certificate/certificate of incorporation
7.	Attach copy of CR12 Certificate from Business Registration Services (BRS) valid for the last 6 months from the date of tender opening.
8.	Duly completed, signed and stamped Form of Tender (as per the prescribed format attached in section IV of this document)
9.	Duly filled and signed Price Schedules completed in accordance with ITT 14 and ITT 19
10.	KRA PIN certificate with VAT obligation or Tax Exemption Certificate. Alternatively provide a VAT certificate. (This will be authenticated in

No	Mandatory eligibility criteria by the tenderer
	the KRA PIN Checker)
11.	Valid Tax compliance certificate or Tax Exemption Certificate. (This will be authenticated in the KRA TCC Checker or Tax Exemption Checker)
12.	Provide a tender security of KSh. 100,000.00 valid for a minimum of 149 days inform of Insurance Guarantee issued by an insurance company registered and licensed by the Insurance Regulatory Authority or Demand Bank Guarantee issued by a bank or a financial institution approved and licensed by the Central Bank of Kenya.
13.	Tender is valid for 119 days. Indicate as required in the form of tender
14.	Tender Security is valid for 149 days.
15.	Duly filled Certificate of Independent Tender Determination
16.	Submit a statement in the bidder's letter head indicating that the bidder or their sub-contractor(s), if any, is not debarred by PPRA or any other Authority from participating in procurement proceedings. Submit a duly filled and signed Form SD1
17.	Self-declaration that the person/tenderer will not engage in any corrupt or fraudulent practice. Submit a duly filled and signed Form SD2
18.	Duly signed declaration and commitment to the code of ethics
19.	Submit a statement in the bidders letter head that the company is not insolvent, receivership, bankrupt or in the process of being wound up
20.	The firm must have a physical address and administrative office - (Attach evidence of lease or ownership of premise explicitly showing a verifiable physical address).
21.	The bidders shall submit the latest two (2) years (2020 and 2021) audited (by a certified auditor) financial statements.

Tenderers who do not pass the mandatory eligibility criteria will be considered non-responsive at this stage and will thus not be considered further.

STAGE II: TECHNICAL EVALUATION

No.	DESCRIPTION	Compliant (YES OR NO)
T1	NCA registration class 7 and valid practicing license for buildings and water	
T2	Key personnel comprising of one (1) Engineer, one (1) foreman, Steel fixers, carpenters, masons. The bidder must provide proof of qualification	
T3	Three projects comprising of intake works satisfactorily completed within the last five years. The bidder must provide evidence such as completion certificates, Signed LPOs or Agreements	

Bidders meeting the technical specifications will be progressed to stage three i.e. Financial Evaluation on capacity to deliver the contract.

DUE DILIGENCE

NEMA may conduct a due diligence after Tender evaluation process and before award of the Contract to confirm and verify the qualifications of the lowest evaluated most responsive tenderer to be awarded the contract.

STAGE III: FINANCIAL EVALUATION

Financial situation will be assessed in accordance with **Form FIN – 3.1**, **Form FIN – 3.2** and **Form FIN – 3.3**. Tenderers who will be determined financially incapable of meeting the financial obligations of the contract will not be considered further. Tenderers who will be financially responsive will be ranked from the lowest evaluated bidder.

RECOMMENDATION FOR AWARD

The lowest evaluated bidder will be recommended for award of contract.

1. QUALIFICATION FORM SUMMARY

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.14.	Form of Tender	
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 3.8	Form of Tender	
5	State- owned Enterprise	Meets conditions of ITT 3.7	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 1 st January 2019 .	Form CON-2	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender	
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	Form CON – 2	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		pending litigation will NOT be resolved against the Tenderer.		
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1 st January 2019 .	Form CON – 2	
11	Financial Capabilities	<p>(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 Five Million equivalent for the subject contract(s) net of the Tenderer's other commitments.</p> <p>(ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.</p> <p>(iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last Two years (2020 & 2021) shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.</p>	Form FIN – 3.1, with attachments	
12	Average Annual Construction	Minimum average annual construction turnover of Kenya Shillings 7.5 Million , equivalent	Form FIN – 3.2	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
	Turnover	calculated as total certified payments received for contracts in progress and/or completed within the last Two years (2020 & 2021) years, divided by Two years		
13	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last three years, starting 1 st January 2019 .	Form EXP – 4.1	
14	Specific Construction & Contract Management Experience	A minimum number of Three similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1st January 2019 and tender submission deadline i.e. 14th December 2022 (5) contracts , with a total value Kenya shillings Five Million or equivalent.	Form EXP 4.2(a)	

QUALIFICATION FORMS

1. FORM EQU: EQUIPMENT

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

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

Omit the following information for equipment owned by the Tenderer.

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

2. FORM PER -1

Contractor's Representative and Key Personnel Schedule

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

Contractor' Representative and Key Personnel

1.	Title of position: Contractor's Representative	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
2.	Title of position: [_____]	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
3.	Title of position: [_____]	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
4.	Title of position: [_____]	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
5.	Title of position: [insert title]	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>

Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>

3. FORM PER-2:

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

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

Name of Tenderer

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

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

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

Declaration

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

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

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]</i>

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

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

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

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____ Date: (day

month year): _____

4. TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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.

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

4.2 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 <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8.
2. Included are the organizational chart and a list of Board of Directors.

4.3 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

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

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

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

Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)

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

4.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

4.4.1. Financial Data

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

*Refer to ITT 15 for the exchange rate

4.4.2 Sources of Finance

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

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

4.4.3 Financial documents

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

- (a) reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
 - (b) be independently audited or certified in accordance with local legislation.
 - (c) be complete, including all notes to the financial statements.
 - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements¹ for the _____ years required above; and complying with the requirements

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

4.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

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

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

4.6 FORM FIN – 3.3:

Financial Resources

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

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

4.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

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

Current Contract Commitments					
	Name of Contract	Procuring Entity's Contact Address, Tel,	Value of Outstanding Work [Current Kenya Shilling /month Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month]
1					
2					
3					
4					
5					

4.8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Page _____ of _____ pages

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

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

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

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

Specific Construction and Contract Management Experience (cont.)

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

4.11 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

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

ITT No. and title: _____

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

1. Key Activity No One: _

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

² If applicable

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

2. Activity No. Two

3.

OTHER FORMS

5. FORM OF TENDER

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

INSTRUCTIONS TO TENDERERS

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

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

To: [Insert complete name of Procuring Entity]

Dear Sirs,

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

The above amount includes foreign currency 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 Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
- 3. We agree to adhere by this tender until _____ [Insert date], and it shall remain binding upon us and may be accepted at any time before that date.
- 4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.
- 5. We, the undersigned, further declare that:
 - i) No reservations: We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
 - ii) Eligibility: We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
 - iii) Tender-Securing Declaration: We have not been suspended nor declared ineligible by

- the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
- iv) **Conformity:** We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works];*
- v) **Tender Price:** The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
- vi) **Option 1,** in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies];* Or
- Option 2,** in case of multiple lots:
- a) **Total price of each lot** *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies];* and
- b) **Total price of all lots** (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];*
- vii) **Discounts:** The discounts offered and the methodology for their application are:
- viii) The discounts offered are: *[Specify in detail each discount offered.]*
- ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts];*
- x) **Tender Validity Period:** Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- xi) **Performance Security:** If our Tender is accepted, we commit to obtain a 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 subcontractor, 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, Project Manager, 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 ITT 3.8];*
- xv) **Commissions, gratuities, fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

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

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

Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in “**Appendix 1- Fraud and Corruption**” attached to the Form of Tender.

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

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

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

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]* **Date signed** *[insert date of signing]* day of *[insert month]*, *[insert year]*

Date signed _____ day of _____, _____

Notes

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

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

A. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

Instruction to Tenderer

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

(a) Tenderer's details

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

General and Specific Details

b) **Sole Proprietor**, provide the following details.

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

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

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

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

i) Private or public Company _____

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

Nominal Kenya Shillings

(Equivalent)..... Issued Kenya

Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

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

i) Are there any person/persons in (Name of Procuring Entity) who has/have an interest or relationship in this firm? Yes/No.....

If yes, provide details as follows.

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

ii) **Conflict of interest disclosure**

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is		

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

f) Certification

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

Full Name _____ Title

or Designation _____

(Signature)

(Date)

B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the _____
_____ [Name of Procuring Entity]
for: _____ [Name and number of
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 _____ [Name of Tenderer] that:

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

Name _____ Title_ Date _____

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

C. SELF - DECLARATION FORMS

FORM SD1

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

I,, of Post Office Box being a resident of in the Republic of do hereby make a statement as follows: -

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of (*insert name of the Company*) who is a Bidder in respect of Tender No. for (*insert tender title/description*) for (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.
3. THAT what is deponed to herein above is true to the best of my knowledge, information and belief.

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

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 the Procuring entity*) and duly authorized and competent to make this statement.
- 2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of (*insert name of the Procuring entity*) which is the procuring entity.
- 3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of (name of the procuring entity)
- 4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender
- 5. THAT what is deponed to herein 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 hereby 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

- 2.** 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.

3. Requirements

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.

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

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

In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:

- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
 - i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii) "fraudulent practice" is any act or omission, including misrepresentation, 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;
 - iv) "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;
 - v) "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 process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.
- c) Rejects a proposal for award¹ of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
- e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service

providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect² all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

- f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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

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

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

Beneficiary: _____

Request for Tenders No:

Date: _____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (here 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 on or before that date.

[signature(s)]

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

FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

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

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

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

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

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

[Date]

[Signature of the Guarantor]

[Witness]

[Seal]

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

TENDER-SECURING DECLARATION FORM

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

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

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

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

that:

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

Signed:..... Capacity /

title (director or partner or sole proprietor, etc.) Name:

..... Duly authorized to

sign the bid for and on behalf of: *[insert complete name of Tenderer]*

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

Appendix to Tender

Schedule of Currency requirements

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

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 - WORK REQUIREMENTS

SECTION V - DRAWINGS

A list of drawings

Drawing No.	Description
1	Gabions Plan
2	River Cross Section
3	Weir Cross Section
4	Weir Cross Section Structural
5	Wing Walls
6	Gabions Cross Sections

SECTION VI – SPECIFICATIONS

SECTION I: GENERAL DESCRIPTION OF WORKS

Scope

These are given without warranty and for guidance only:-

Construction of an Intake Weir along River Narumoru in Thome, Laikipia County.

Location

The works are located at along River Narumoru in Thome, Laikipia County.

The Contractor Shall visit the site to acquaint himself with the topography, soil condition, access, source of construction materials and reliability of water source, power requirements, and periods that execution of work will be possible etc. No claims incurred due to lack of knowledge of the site conditions will be considered.

The Resident Engineer's House.

The contract does not allow for Resident Engineer's office

Drawings

All drawings are deemed to be self-explanatory. However, where doubts exist, the contractor should liaise with the Engineer before proceeding with the works.

Site Office

There is a no provision for in this contract.

Labour camp

The contractor is not permitted to house labour on site. He will be responsible for the transportation of workmen to and from site at his own cost and risk.

MANAGEMENT OF THE CONTRACT

The Project Engineer will be responsible for the contract management and site supervision. All materials and workmanship shall comply with the latest edition of the Ministry of Public Works specifications for Civil Engineering.

EXTENT OF CONTRACT AND ALTERATION OF DESIGN

The works specified under this contract shall include all general work preparatory to execution of all matters, things, requisites and work of any kind necessary for the due and satisfactory construction, completion and maintenance of the work to the intent and meaning of the drawings and this specification and further drawings and orders, that may be issued by the Engineer from time to time. Compliance by the Contractor with all the General Conditions of Contract, whether specifically mentioned or not in the clause of this specification, all materials, apparatus, plant, machinery, tools, fuel, water, timbering and tackle of every description, transport, offices, stores, workshops, staff, labour, the provision of proper and sufficient protective works, temporary fencing, lighting and watching required for the safety of the public and protection of the works and adjoining lands: first aid equipment, sanitary, accommodation for the staff and workmen; the effecting and maintenance of all insurances, the payment of all wages, salaries, fees, royalties, duties or other charges arising out of the execution of the works and the regular clearance of rubbish. Re-instatement and clearing and leaving perfect on completion.

The Contractor will be deemed to have included in his rates the cost of complying with the requirements of this Specification and General Conditions of the Contract unless otherwise specified.

Should the Contractor have comments regarding soundness of the design of any part of the work, or should he consider that the execution of the design is impossible on any part of the, Contract, the Contractor is required to notify the Engineer in writing at the time of the tender and provide factual evidence substantiating his opinion when required to do so by the Engineer.

Notices given by the Contractor in respect of the above after the tender is submitted will not be considered as the basis of a claim for additional costs or extensions of the time.

The Engineer may require to alter the design of any part of the structure should site conditions warrant such a change and the rates entered in the Bill of Quantities should be applicable for the similar items. The rates for the items of the work not covered by the Bill of Quantities shall be established by the Engineer.

PROGRAMMES FOR EXECUTION OF THE WORKS

In accordance with the terms of Clause 14 of the General Conditions of the Contract, the Contractor shall submit to the Engineer within 14 days from the order to commence fully detailed programme showing the order, procedure and method by which he proposes to carry out the construction and completion of the works

The information to be supplied to the Engineer shall include drawings showing the general arrangement of the temporary offices and any other temporary structures, which the Contractor proposes to use together with details of the construction plant and temporary works and all other devices, which he proposes to adopt for the construction and completion of the whole of the works, and in addition to details of the labour strength, skilled and unskilled, and supervision arrangements.

The Order in which it is proposed to execute the permanent works is subject to adjustment and approval by the Engineer and the Contract Price shall be held to include for any reasonable and necessary adjustment required by the Engineer during the course of the Works.

The Contractor will be deemed to have considered the effect of seasonal weather variations, when programming his operations it must be clearly understood, that rains of up to 75mm per day will be deemed to be normal and expected. No claims by the Contractor for extension of time due to rains or floods less than 75mm per day as measured by the Meteorological Department will be considered by the Engineer.

The Contractor, when preparing his programme has to consider the time for the delivery of any imported material and the Engineer's normal working hours.

The Engineer's normal working hours shall be defined as 8a.m. to 5p.m. on weekdays with Saturdays and Sundays set aside for rest. If the Contractor wishes to execute permanent works outside these hours, he shall obtain the written permission of the Engineer to make provision for supervision of such works.

Contractor shall carry out the Contract in accordance with the Programme agreed with the Engineer, but he shall in no manner be relieved by the Engineer's approval of the programme

of his obligations to complete the works by the prescribed completion date, and he shall from time to time review his progress and make such amendments to his rate of execution of the works as may be necessary to fulfill his obligations.

If in the opinion of the Engineer the plant or the equipment used by the Contractor for any specific item of the work does not fulfill the requirements of the specifications in respect of the workmanship, quality and safety of structures, sum items of plant and equipment shall be replaced with similar or equivalent items of plant or equipment to the satisfaction of the Engineer. No extra payment will be made in respect of such replacements.

The construction of hoarding shall commence immediately the project is handed over to the Contractor and shall comply with the requirements given in clause 1731.

TEMPORARY WORKS

1. After the Contract is placed and before the work commences, the Contractor shall submit to the Engineers drawings showing the general arrangement of his offices, quarters, workshops, etc and other temporary works with diagrams and descriptions showing how he proposes to execute such temporary works and how they fit into his programme for the permanent works, all to be subject to adjustment and approval by the Engineer.
2. The Contractor shall be fully responsible for the sufficiency, stability and safety of all temporary works and their care in accordance with the Conditions of Contract.
3. The Contractor shall at his own expense, supply in advance to the Engineer for his approval detailed drawings and calculations of stability of such temporary works as the Engineer may direct, but no approval given or implied by the Engineer shall relieve the Contractor of his responsibilities in connection with the temporary works
4. Unless otherwise instructed, upon completion of the contract and after receiving approval in writing from the Engineer, the Contractor shall take down and remove all structures forming part of his own camp and that of the Engineer, and shall arrange for the disconnection of water supply, remove all drains and culverts, backfill trenches, fill in all latrine pits, soak away and other sewage disposal excavations, with the exception of items and services to revert to the ownership of the Employer and shall restore the site as far as practicable to its original condition and leave it neat and tidy to the satisfaction of the Engineer.

SITE PERSONNEL

The Engineer will require the Contractor to submit a list of professional and sub-professional personnel to be employed on the site stating their qualifications and experience.

The Contractor shall be responsible for ensuring, that all personnel of Non-Kenyan origin employed on site by himself or his Sub-Contractors or who are otherwise connected with the

construction contract through the Contractor must be approved and cleared individually in writing by the appropriate Government Official to work on the project. Where personnel are not approved, the Contractor shall be responsible at his own expense for obtaining and employing suitable and approved personnel.

The Engineer reserves the right to determine suitability of the persons employed by the Contractor and may request replacement at any time of any member of the team employed by the Contractor. If in the opinion of the Engineer the presence of such a person is deleterious to the execution of the Contract, the Engineer's decision is final and binding.

The Site Agent to be a Registered Engineer.

The Contractor shall keep constantly a literate English speaking Agent or Engineer as his representative on the site, competent and experienced in the type of works Involved, who shall give his whole time to the Supervision of the Contractor's operations.

The name of such Agent or Representative shall be submitted in writing to the Engineer for approval and he shall receive on behalf of the Contractor all directions and instructions from the Engineer or his representative and such directions and instructions shall be deemed to have been given to the Contractor in accordance with the conditions of contract.

NOTICE OF OPERATIONS

No important operations shall be carried out without the consent of the Engineer in writing, or without full and complete notice also in writing, being given to the Engineer by the Contractor sufficiently in advance of the time of the operation as to enable the Engineer to make such arrangements, as he may deem necessary for its inspection.

The Contractor shall supply, from time to time, to the Engineer in writing, full information with respect of locations in which the work is being prepared.

The Contractor shall give the Engineer not less than 24 hours notice of his intentions to set out or give levels for any part of the works, in order that arrangements may be made for checking. Any benchmarks, setting out pegs or other line or level markings installed or made by the Engineer shall be carefully preserved by the Contractor. Working shall be suspended for such times as may be necessary for checking the lines and levels on any part of the work.

SETTING OUT

It will be the responsibility of the Contractor to obtain before commencing work the value and location of the benchmarks to be used for the works from the Engineer. All temporary benchmarks will be referred hereto. The Contractor shall construct such temporary benchmarks as the Engineer may direct and agree the level thereof with the Engineer. The establishment of such temporary benchmarks will be deemed to be part of the Contractor's responsibility in setting out the works and no additional payment will be allowed.

Should the Contractor discover any error in the alignment or levels of the basic setting out, he shall at once notify the Engineer, who will then issue amended drawings or instructions regarding the correction of the error.

All approved setting out points, lines, stations etc shall be marked by concrete markers and

steel pegs or as otherwise approved by the Engineer.

The contractor shall allow in the Bill of Quantities for complying with the provisions of this Clause and any abortive setting out occasioned by errors in the alignment of levels of the Contractor's basic setting out.

HEALTH, SAFETY ON SITE AND WELFARE

The Contractor shall ensure, so far as is reasonably practicable and to the satisfaction of the Engineer, the health, safety and welfare at work of his employees including those of his sub-contractors and of all other persons on the site.

From the time any portion of the works is commenced, until the end of the maintenance period, the Contractor shall be responsible for protecting the public from anything dangerous to persons or property and for the safe and easy passage of pedestrians and vehicular traffic.

The Contractor shall designate one of his senior staff, who shall have specific knowledge of safety regulations and experience of safety precautions on similar works and who shall advise on matters affecting the safety of workmen and on measures to be taken to promote safety in compliance with the factories Act Cap. 514 as a safety officer.

The Contractor shall provide protective clothing and equipment, first aid stations with such personnel and equipment as are necessary. The appropriate information, instruction, training and supervision will be arranged by the Contractor to ensure the safety and health of all the persons employed on the works, all in accordance with the laws of Kenya.

The Contractor shall provide adequate waterborne sanitation and refuse collection and disposal complying with the laws of Kenya and all local by-laws, and to the satisfaction of the Engineer, for all houses, offices, workshops erected on site. Construction of pit latrines will not be permitted unless the Engineer has given his approval in writing.

During the period of execution of the works the Contractor shall ensure that

No pollution of existing water courses or of reservoir catchment areas is allowed to take place as a result of his operation.

In addition to providing, equipping and maintaining adequate first aid stations throughout the works in accordance with the Laws of Kenya, the Contractor shall provide and maintain on site for a duration of contract a fully equipped dispensary. This shall be with a qualified Clinical Officer who shall offer the necessary medical advice on AIDS/HIV and related diseases to Engineers and Contractors site staff. The contractor shall allow for all costs of providing these facilities in his rates.

Welfare facilities:

The Contractor **SHALL NOT** provide welfare facilities.

PRIVATELY OWNED AND PUBLIC UTILITY SERVICES

The Contractor shall make him acquainted with the position of all existing works and services inter alia sewers, storm water drains, cables for electricity and telephone and lighting poles and water mains before any excavation commences.

The Contractor will be held responsible for damage caused in the course of the execution of

the works to sum existing works and services and shall indemnify the Employer against any claims arising from such damage (including consequential damages). Any damage caused must be made good at the Contractor's own expense.

Such existing works and services, where exposed the execution of the works, must be properly shored, hung-up and supported to the satisfaction of the Engineer and of the Authority concerned. The Contractor shall exercise special care, when refilling trenches or other excavations around sum existing works of services.

Poles supporting cables, etc adjacent to the works will be kept securely in place, until the work is completed and will then be made as safe and permanent as before.

Notwithstanding the foregoing requirements and without lessening the Contractor's responsibility, the contractor shall inform the Engineer immediately when existing works have been exposed and conform to any requirements of the Authority concerned and of the Engineer.

Any damage to or interference with existing services occasioned during the progress of the works, will be deemed to be the responsibility of the Contractor' who shall undertake to make good at his own expense any damage so caused to the existing underground services or other features, and shall be liable in respect of all claims arising from such damage or interference, however occasioned.

Only when and as directed by the Engineer the position of an existing work or service can be changed by the Contractor to meet the requirements of the proposed work. The cost of such work will be paid for on a day work basis, except where a specific item has been provided in the Bills of Quantities.

EXISTING ROADS AND ACCESSES

The Contractor shall comply with all requirements of the Employer, owners or the competent Authority concerning the use of traded equipment or other construction plant on any public or private road.

The cost of providing all *diversions*, signs, operators, flagmen and all reinstatement to the approval of the Engineer will be deemed to be included in the rates entered in the Bill of Quantities, as will the cost of any road opening permit.

Before excavating across any public road, the Contractor shall give 10 days notice in writing to the Engineer and the Local Authority his intention to excavate.

He shall satisfy the Engineer, the Local Authority and the Police as to the precautions he proposes to take and the signs and lights to be provided and operated. On *any* road or track at least 4 red lights shall be suitably placed on either side of the trench and diversions shall be clearly marked, signed and maintained.

The Contractor shall further give to the Engineer a 24 hours notice before excavating across a private road. Existing access to lands, property and all other things will be maintained by the Contractor during the continuance of the Works to the Engineer's satisfaction. The cost of such maintenance will be deemed to be covered by and included in the rates entered on the Bills of Quantities.

When a road, used by the Contractor for transporting labour or construction plant or for delivery of any materials for the works, is closed under Section 71 of the traffic ordinance 1962, or amendments thereto, the Contractor shall obey such closure and shall use alternative roads.

COMPLIANCE WITH STATUTES AND REGULATIONS

In addition to the requirements of Clause 26 of the General Conditions of Contract, the Contractor shall be responsible for acquainting himself with all current valid statute ordinances or bye-laws or building regulations, which may affect the Works and shall include in his rates for all costs arising from compliance with the same. This applies in particular to the training levy and similar taxes for which no claims on the part of the Contractor will be entertained.

The Contractor shall also keep in close touch with Police and other Government Officials of the area regarding their requirements in the control of traffic or other matters, and shall provide all assistance or facilities, which may be required by such officials in the execution of their duties.

The Contractor's attention is drawn to legal Notice No.237 of October, 1971, which requires payment by the Contractor for Training Levy at the rate of 0.25% of the Contract sum on all contracts of more than KSh50,000.00 value and his tender must include for all costs arising or resulting thereof. The Training levy shall be paid by the Contractor without delay. The original receipt shall be given to the Engineer for verification. No payment certificate will be certified by the Engineer, until the Contractor complies with the above legal notice.

The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st September, 1993 which requires payment of VAT on all contracts.

The tenderer is advised that in accordance with Government public notice No. 35 & 36 Dated 11th September 2003 operational from 1st October 2003, withholding VAT will be levied against the contract by the Employer and remitted to the Commissioner of VAT through all interim certificates. It should however be noted that this is not additional tax but a new mode of payment for VAT, any excess payment will be refundable once the Contractor has submitted monthly returns to the Commissioner of VAT who will do the refunds when satisfied that the VAT regulations have been complied with.

This item **SHALL** be priced at the Grand Summary page.

WATER SUPPLY

The Contractor shall provide clean and sufficient supply of fresh water both for construction of the works and for all offices and workshops, etc. includes the arrangement of pipe lines, meters, etc for connecting to local water main, the provision of storage tanks or water conveyance where necessary, payment of all fees and water charges.

The water shall be reasonably clear of suspended solids and free from any matter in quantities considered by the Engineer to be deleterious to the proposed work. Water supplied to the Engineer's offices, laboratories, etc. shall be drinkable to the satisfaction of the Medical Officer in the area. No separate payment shall be made for the provision of water or its attendant facilities and the Contractor shall allow for all these in his tender rates.

In the event that a water main is not available on or near the site, or that any available mains will not have sufficient capacity to provide water adequate for the works, then the Contractor shall provide temporary tanks or other means of collecting, storing and distributing water on the site.

LIGHTING, POWER AND TELEPHONE

The Contractor shall make his own arrangements for the supply of light, power and telephone required for the construction of the works and shall pay all fees and charges in connection therewith.

The Contractor shall arrange with the appropriate authority for a temporary meter and supply of electricity and provide all temporary wiring, power and lighting points as he may consider necessary. In the event no fixed electricity being available, the Contractor shall provide the necessary power generating plant at his own expense.

WORKING AREA

The Contractor shall restrict his operations to those areas made available to him by the Engineer and shall at all times provide and maintain an adequate access for the Employer's employees and vehicles to carry out their normal duties in and around the existing works.

The Contractor shall, before entering upon any land purchased, rented, or for the use of which compensation has been paid, ensure that all formalities have been completed and the agreement of the Owner, Tenant and the Engineer has been obtained.

All requirements of land for temporary works and construction purposes shall be to the approval of the Engineer but the Contractor will make all necessary arrangements with the property owners concerned and pay all charges arising therefrom. On or before completion of the Contract, the Contractor shall remove all temporary works and shall restore all such land to the condition in which it was immediately prior to the occupation thereof as far as is reasonable and practicable. No separate payment will be made to the Contractor on account of these items and the Contractor must make due allowance for them in his rates.

CO-ORDINATION OF THE WORKS

The Employer reserves the right to execute works on the site which are not included in this Contract. He will employ for this purpose either his own employees or another Contractor. The Contractor shall ensure that neither his own operations nor trespass by his employees will interfere with the operations of the Employer nor his Contractor employed on such works.

The Contractor will be required to carefully co-ordinate his activities and work, both on and off site, with the activities and work of the other Contractors, Sub-Contractors, statutory, undertaking and all supervisory staff for the works appointed by the Employer. He shall allow all works to proceed without undue hindrance and will cooperate to expedite execution of the works.

If any dispute or difference of any kind whatsoever shall arise between the Contractor or

statutory undertaking regarding the phasing, progress or execution of the works then the Engineer shall have full power to direct in what order the works, or any portion thereof shall be carried on or completed and he may from time to time require the whole or any portion of the works to be discontinued or the execution thereof postponed for such a period as he may think fit.

The Contractor shall respect any works executed by others and articles supplied or installed by others and will be held responsible for any loss or damage thereto, if caused by him or his Sub-Contractors.

COPIES OF ORDERS AND TEST CERTIFICATES

Before entering into any Sub-Contract for the supply of any material or article the Contractor shall obtain the Engineer's approval in writing of the Sub-Contractor from whom he proposes to obtain such materials or goods. Should the Engineer at any time be dissatisfied with such materials or goods or with the method of operations carried out at such Sub-Contractor's works or place or business, he shall be empowered to cancel his previous given approval of sub-contract and shall specify any other supplier whom he may choose, or shall approve another sub-contractor for the supply of such materials or goods. The Contractor shall then obtain such said materials or goods from such other supplier and shall bear any additional cost thereof, together with the costs and consequences of replacing any unsatisfactory materials already incorporated in the work.

The Contractor shall deposit with the Engineer samples of materials and manufactured articles including the manufacturer's specification, when and where appropriate.

When instructed by the Engineer the Contractor shall submit test-certificates from the suppliers of the materials and goods to be used for the contract to the Engineer. Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the specifications and shall give the results of all tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

The Contractor shall provide the Engineer with copies of all orders for the supply of materials and goods required in connection with the works as the Engineer may require.

All materials and manufactured articles shall be stored on site in a manner acceptable to the Engineer. The Contractor shall carefully protect from weather and vermin all work, materials and manufactured articles, which may be affected.

PROGRESS PHOTOGRAPHS AND RECORD DRAWINGS

The contractor shall keep a record of progress photos and submit them to the Engineer Weekly or as directed.

The photographs shall be mounted on A4 loose-leaf sheets, minimum 200g, with transparent plastic sheets.

After the work has been completed, the Contractor shall furnish as built drawings, showing the works as constructed together with all other information that may either be required or be useful for the operation and maintenance of the works in the future, such as alignment and

depth of cover of pipelines, type of soil, rock levels, type, dimensions and location of structures, size of pipelines and cables encountered during excavation

All drawings shall be A 1 in size to the ink border and drawn on a perm trace paper.

SURVEY EQUIPMENT FOR THE ENGINEER

The Contract has no provision for the supply of survey equipment

The Contractor will provide two experienced chainmen for the assistance of the Engineer in checking the setting out of the works.

MAINTENANCE AND INSURANCE OF BUILDINGS

The Contractor shall keep all buildings provided by him, for the use of the Engineer and his staff, in a well maintained, clean and fully habitable condition, and shall maintain all access roads, car parks, footpaths, fences, gates, drains, potable water supplies and sewage disposal systems in a good state of repair, all to the satisfaction of the Engineer.

The Contractor shall also provide an adequate refuse collection service for the office, laboratory and other buildings provided by the Contractor for the use of the Engineer and his staff.

The Contractor shall maintain all furniture and equipment provided in a reasonable state of repair and usable condition and shall replace promptly any item which becomes unserviceable or is lost.

All buildings, furniture and any equipment provided by the Contractor for the Engineer's use shall be insured by the Contractor against any loss or damage by accident, fire or theft for the duration of the Contract, in accordance with the general conditions of Contract. Theft shall include all personal belongings of the Engineer and his staff.

ATTENDANCE ON ENGINEER AND STAFF

The Contractor shall provide such labour as is reasonably necessary to attend to the day to day office requirements and maintenance, and to assist with office cleaning, site measurements and the checking and testing of the works. The Contractor shall replace any of his employees attending to the Engineer who is unable to carry out his duties due to illness or any other reason. The Contractor shall provide adequate security by day and by night for all the buildings provided by him for the Engineer and his staff. This shall include the Provision of full-time attending permanent watchmen.

The Contractor shall include all the costs of complying with this Clause in the item for maintenance of Engineer's office in the Bill of Quantities.

SIGNBOARDS

The Contractor to provide Signboards for the project.

SITE MEETINGS

The Contractor to provide for monthly site meetings to be held on site and where the Contractor would be expected to attend.

ENVIRONMENTAL PROTECTION (where applicable)

The Contractor shall comply with the Statutory Regulations in force in Kenya regarding environmental protection and waste disposal, and shall liaise with the National Environmental Management Agency (NEMA). Within four (4) weeks of the order to commence work, the Contractor shall prepare and submit a specific Environmental Management Plan for the project and his operations, relating to the approved Environmental Impact Assessment. The Environmental Management Plan shall outline potential environmental hazards and risks, and provide an action plan to deal with the hazards, minimize the risks, and mitigate adverse environmental impacts, and include a general decommissioning plan covering all relevant aspects of the project. The Environmental Management Plan shall identify monitoring indicators and reporting requirements.

The Contractor shall be required to submit environmental progress reports to the Engineer every three (3) months. The Contractor shall ensure so far as is reasonably practicable and to the satisfaction of the Engineer; that the impact of the construction on the environment shall be kept to a minimum and that appropriate measures are taken to mitigate any adverse effects during the construction.

The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the Contractor's construction operations and equipment. All unnecessary destruction, scarring, damage or defacing resulting from the Contractor's operations shall be repaired, replanted, reseeded or otherwise corrected as directed by the Engineer, and at the Contractor's expense.

The Contractor shall ensure that measures are in place to control soil erosion and water pollution, by use of berms, dykes, silt fences, brush barriers, dams, sediment basins, filter mats, netting, gravel, mulches, grasses, slope drains, contour banks, and other erosion control devices and methods. Temporary erosion control provisions shall be coordinated with permanent erosion control features to assure economical, effective and continuous measures throughout the period of the works. The Contractor's attention is drawn to the requirements of Clause 502, in that works need to be progressively finished so that permanent vegetation can establish quickly to mitigate soil erosion and erosion of drains.

The Contractor shall provide all the labor, equipment, materials, and means required and shall carry out proper and efficient measures wherever and as often as necessary to minimize the dust nuisance. The Contractor shall comply with all applicable Kenyan laws, orders and regulations concerning the prevention, control and abatement of excessive noise. Blasting, use of jackhammers, pile driving, rock crushing, or any other activities producing high-intensity impact noise may be performed at night only upon approval of the Engineer.

Immediately after extraction of materials, all borrows pits shall be backfilled to the satisfaction of the Engineer. In particular borrow pits near the project road shall be backfilled in such a way that no water collects in them.

Spilling of bitumen fuels Oils and other pollutants shall be cleared up.

The Contractor's attention is drawn to the requirements of the Standard Specification in regard to the environment and in particular to the following clauses:

Clause 115: Construction Generally Clause 116: Protection from Water Clause 136: Removal of Camps

Clause 605: Safety and Public Health Requirements Clause Clause 607: Site Clearance and Removal of Topsoil and Overburden

Payment in respect of this Clause 142 is included as a Lump Sum in the Bill of Quantities. Payment of the Lump Sum will be by equal monthly instalments over the period of the Contract excluding the Period of Maintenance. The total sum of the instalments shall not exceed the Lump Sum, and payment of the monthly instalment will only be made for that month if the Engineer is satisfied that the Contractor has fully complied with the requirements of Clause 142, otherwise the Contractor shall forfeit such instalment.

MATERIALS SPECIFICATIONS

CONCRETE WORKS

DEFINITIONS

Structural concrete is any class of concrete, which is used in reinforced concrete, prestressed or unreinforced concrete construction, which is subject to stress.

Nonstructural concrete is composed of materials complying with the specification, but for which no strength requirements are specified and which is used only for filling voids, building foundations and similar purposes, where it is not subjected to significant stress.

A formed surface is a face which has been cast against formwork, and an unformed surface is a horizontal or nearly horizontal surface preceded by screeding or trowelling to level and finished as required.

Moderate exposure shall refer to surfaces exposed from severe rain, buried concrete or concrete continuously under water.

Intermediate exposure shall refer to surfaces exposed to driving rain, alternate wetting and drying, traffic, corrosive fumes, and heavy condensation.

Severe exposure shall refer to surfaces exposed to sea water, any water having a PH of 4.5 or less, or ground water containing sulphates.

'Formwork' or 'shuttering' shall include all temporary moulds for forming the concrete to the required shape, together with any special lining that may be necessary to produce the concrete finish required.

'False work' or 'centering' shall consist of furnishing, placing and removal of all temporary constructionsuch as framing, props, struts and piles required for the support of forms.

A pour refers to the operation of placing concrete into any mould, bay or formwork, etc., and also to thevolume which has to be filled. Pours in vertical succession are referred to as lifts.

CEMENT

Ordinary and Rapid Hardening Portland Cement shall be sampled and tested in accordance with andshall comply with all the requirements of Kenya Standard KS02-21.

The weight of magnesium oxide in the cement shall not exceed 5% and the content of total sulphurexpressed as SO₃, shall not exceed 3.5%.

The minimum compressive strength of 3 mortar cubes shall be as follows:-

TABLE

Type of Cement	Strength at 3 daysN/mm²	Strength at 7 daysN/mm²	Strength at 28daysN/mm²
Ordinary Portland Cement Rapid	17.5	6.5	38.0
Rapid HardeningCement	23.0	31.0	46.0

Cement shall be free flowing and free of lumps. It shall be supplied in the manufacturer's sealed unbroken bags or in bulk. Bagged cement shall be transported in vehicles provided with effective means of ensuring that it is protected from the weather. Bulk Cement shall be transported in vehicles or in containers built and equipped for the purpose.

Cement in bags shall be stored in a suitable weatherproof structure of which the interior shall be dry and well ventilated at all times. The floor shall be raised above the surrounding ground level and shall be soconstructed that no moisture rises through it

Each delivery of cement in bags shall be stacked together in one place. The bags shall be closely stackedso as to reduce air circulation but shall not be stacked against an outside wall. If pallets are used, they shall be constructed so that bags are not damaged during handling and stacking. No stack of cement bagsshall exceed 3m in height Different types of cement in bags shall be dearily distinguished by visible markings and shall be stored in separate stacks.

Bulk cement shall be stored in weatherproof silos which shall bear a clear indication of the type of cement contained in them. Different types of cement shall not be mixed in the same silo.

The Contractor shall provide sufficient storage capacity on site to ensure that his anticipated

programme of work is not interrupted due to lack of cement. Cement which has become hardened or lumpy or fails to comply with the specification in any way shall be removed from the site.

All cement used in the works shall be tested by the manufacturer or the Contractor in a laboratory acceptable to the Engineer. The tests to be performed shall be those set out in KS 02-21 and the Contractor shall supply two copies of each certificate to the Engineer.

Each set of tests carried out by the manufacturer or Contractor shall relate to not more than one day's output of each cement plant, and shall be made on samples taken from cement which is subsequently delivered to the site. Alternatively, subject to the agreement of the Engineer, the frequency of testing shall be one set of tests for every 200 tonnes of cement delivered to site from each cement plant.

Cement which is stored on site for longer than one month shall be retested in the laboratory of the Materials Department of the Ministry of Transport, Infrastructure, Housing and Urban Development or at the Kenya Bureau of Standard at the rate of one set of tests for every 200 tonnes and at monthly intervals thereafter.

FINE AGGREGATE

Fine aggregate shall be clean, hard and durable and shall be natural sand, crushed gravel sand or crushed rock sand complying with KS 02-95. All the material shall pass through a 5mm sieve and the grading shall be in accordance with Zones 1, 2, or 3 of KS 02-95. In order to achieve an acceptable grading, it may be necessary to blend materials from more than one source.

The fine aggregate shall not contain iron pyrites or iron oxides. It shall not contain mica, shale, coal or other laminar, soft or porous materials or organic matter unless the Contractor can show by comparative tests, on finished concrete as set out in KS 02-595, that the presence of such materials does not adversely affect the properties of the concrete.

Content passing a 75-micron BS sieve shall not exceed 3 per cent for natural or crushed gravel sand or 15 per cent for crushed rock sand.

Chlorides soluble in a 10 per cent solution by weight of nitric acid shall not exceed 0.05 per cent by weight expressed as Chloride ion when tested as set out in KS 02-1238, Subject also to the further restriction given on total chloride content in Clause 1703 d.

Sulphate soluble in a 10 per cent solution by weight of hydrochloric acid shall not exceed 0.4 per cent by weight expressed as SO₃, Subject also to the further restriction given on total sulphate content in Clause 1703 d.

Soundness: After five cycles of the test in AASHTO-T-104 the aggregate shall not show a weight loss of more than 10 per cent.

ADMIXTURES TO CONCRETE MIXES

The Contractor will not be permitted to use admixtures in the concrete without the express approval of the Engineer and in no circumstances will corrosive admixtures be allowed.

Admixtures shall not be used to replace cement. If admixtures are used to entrain air, to reduce the water/cement ratio, to retard or accelerate setting time or to accelerate the development of strength, they shall be used at the rate of dosages as directed by the Engineer. Admixtures shall be measured accurately into each batch by methods approved by the Engineer.

Admixtures shall be dispensed in liquid form. Dispensers for liquid admixtures shall have sufficient capacity to measure at one time the full quantity required for each batch. Unless liquid admixtures are added to pre-measure water for the batch, their discharge into the batch shall be arranged to flow uniformly into the stream of water. Dosages of liquid admixtures shall not vary from the dosage ordered by the Engineer by more than 5%. Equipment for measurement shall be designed to provide convenient confirmation of the accuracy of the measurement. If more than one mixture is used, each shall be dispensed of separate equipment unless otherwise permitted by the Engineer.

In the event of permission being granted in principle, the tests described in the specification shall be carried out with the intended proportion of admixture incorporated and comparison shall be made with concrete manufactured without the admixtures to prove, the density has not been reduced by more than 5%.

Except as otherwise provided for air entraining agents, samples of admixtures proposed for use shall be submitted by the Contractor to the Engineer sufficiently in advance of intended use, to permit test arrangements for determining compliance with the claimed properties.

Any type of admixture shall be uniform in properties throughout its use in the works. Should it be found that the admixtures as furnished is not uniform in properties, its use shall be discontinued

The Contractor may be permitted to use an air-entraining agent to facilitate the use of any construction procedure or equipment. If the Contractor selects to use an air-entraining agent, additional cement shall be included in the concrete mixture. The amount of additional cement shall conform to the weights set forth in table 1703c-1 within the range of air contents shown:

TABLE 1703 c-1

AIR CONTENT	<3%	3%-4%	4%-5%	5%-6%
Additional Cement per m ³ concrete (kg)	0	30	56	104

When an air entraining agent is used, the air content shall in no case exceed 6% by volume in the freshly mixed concrete.

Full compensation for furnishing and mixing the air entraining agent and the additional cement as provided above will be considered as included in the contract prices paid for the concrete involved and no additional compensation will be allowed.

When water reducing retarders are used, the permitted dosage of the admixture shall not

exceed that which will result in an increase in the drying shrinkage of the concrete in excess of 10%.

Water reducers shall reduce the water demand of concrete for a given slump by at least 7% when used at the maximum dosage recommended by the manufacturer, but not more than that needed to obtain the desired retardation. The strength of the concrete containing the admixture shall at the age of 48 hours and after, be not less than that of similar concrete without the admixture.

COARSE AGGREGATE

Coarse aggregate shall be clean hard and durable crushed rock, crushed gravel or natural gravel complying with the requirements of KS 02-95. The material shall not contain any iron pyrites, iron oxides, flaky or laminated material, hollow shells, coal or other soft or porous material, or organic matter unless the Contractor can show by comparative tests on finished concrete as set out in KS02-595 that the presence of each material does not adversely affect the properties of the concrete. The pieces shall be angular, rounded or irregular as defined in KS 02-1238.

Coarse aggregate shall be supplied in the nominal sizes called for in the Contract and shall be graded in accordance with KS 02-95 for each nominal size as follows:

TABLE 1703d-1

Test Size	Percentage by weight passing			
	Normal size of single-size aggregate			
	40mm	20mm	15mm	10mm
40mm	85-100	100	-	-
20mm	0-20	80-100	100	-
15mm	-	-	85-100	100
10mm	-	0-20	0-45	100
5mm	-	0-5	0-10	0-20
2.5mm	-	0-2	0-2	0-5

The single sized aggregate shall be combined in proportions to give overall grading of coarse aggregate within the limits set out in Table 1703-2 as follows:-

Test Service	Percentage by weight passing		
	Normal size of Graded Aggregate		
	40mm to 5mm	20mm-5mm	15mm-5mm
40mm	95-100	100	-
20mm	30-70	95-100	100
15mm	-	-	90-100
5mm	0-5	0-10	0-10

The proportion of clay, silt and other impurities passing a 75micron sieve shall be not more than one percent by weight.

The content of hollow and flat shells shall not be such as will adversely affect the concrete quality whentested as set out in BS 1881. The total shell content shall not be more than the following:

- a. 40mm nominal size and above 2% of dry weight
- b. 20mm nominal size 5% of dry weight
- c. 10mm nominal size 15% of dry weight

Soundness: After 5 cycles of the test in AASHTO T104 the aggregate shall not show a weight loss of more than 12 per cent.

Flakiness Index when tested in accordance with KS 02-1238 shall be not more than 40 for 40mm stone and above and not more than 35 for 20mm stone and below.

If the Flakiness Index of the coarse aggregate varies by more than five units from the average value of the aggregate used in the approved trial mix, then a new set of trial mixes shall be carried out if the workability of the mixes has been adversely affected by such variation.

Impact value shall not be more than 45 per cent when tested in accordance with KS02-1238 and the tenper cent fines shall not be less than 50kN.

Coarse aggregate when mixed with other ingredients in the approved proportions for concrete and tested as set out in KS 02-595, the shrinkage factor shall not exceed 0.05 percent.

The aggregate shall not have a water absorption of more than 2.5 per cent when tested as set out in KS02-1238. Aggregate Crushing Value not exceeding 35% and Los Angeles Abrasion (LAA) not exceeding 50%.

Chloride soluble in a 10 per cent solution by weight of nitric acid shall not exceed 0.05 per cent by weight expressed as chloride iron provided that the total chloride content arising from all Ingredients in a mix including cement water and admixtures shall not exceed 0.05 per cent for prestressed concrete, steam cured concrete or concrete containing sulphate resisting or super

sulphated cement and 0.3 per cent for any other reinforced concrete.

Sulphate soluble in a 10 per cent solution by weight of hydrochloric acid shall not exceed 0.4 per cent by weight expressed as SO₃, provided that the total sulphate content expressed as SO₃ of all the ingredients in a mix including cement, water and admixtures shall not exceed 0.4 per cent by weight of fine aggregate or 4.0 per cent of the weight of cement in the mix, whichever is the lesser.

Aggregate which is potentially reactive when tested in accordance with ASTM Test C289- 71 for the alkali aggregate reaction must not be used? The standard for acceptance being that test results shall plot to the left of the solid line which is shown in figure 2 of the test standard. The Engineer may require that any aggregate be tested for potential reactivity in accordance with ASTM-C289-71.

TESTING OF AGGREGATE

The Contractor shall deliver to the Engineer samples containing not less than 50 Kg .of any aggregate which he proposes to use in the Works and shall supply such further samples as the Engineer may require. Each sample shall be clearly labelled to show its origin and shall be accompanied *by* all the information called for in KS02-45.

Tests to determine compliance of the aggregates with the requirements of Clauses 1703c and 1703d shall be carried out by the contractor in a laboratory acceptable to the Engineer. If the tested materials fail to comply with the Specification, further tests shall be made in the presence of the Contractor and the Engineer and acceptance of the material shall be based on such tests.

A material shall be accepted if not less than three consecutive sets of test results show compliance with the specification.

The Contractor shall carry out routine testing of aggregate for compliance with the Specification during the period that concrete is being produced for the works. The tests to be performed are: grading, silt and clay contents, moisture content and check on organic impurities.

The above tests shall be performed on aggregates from each separate source on the basis of one set of tests for each day on which aggregates are delivered to Site provided that no set of tests shall represent more than 250 tonnes of fine aggregate nor more than 500 tonnes of coarse aggregate, and provided also that the aggregates are of uniform quality. If the aggregate from any source is variable, the frequency of testing shall be increased as instructed by the Engineer.

In addition to the above routine tests, the Contractor shall carry out moisture content as frequently as may be required in order to control the water content of the concrete and chloride contents test as frequently as may be required to ensure that the proportion of chloride does not exceed the limit specified.

The Contractor should take into account of the fact that when the chloride content is variable it may be necessary to test every load in order to prevent excessive amounts of chloride contaminating the concrete.

STORAGE OF AGGREGATES

Aggregates shall be delivered to site in clean and suitable vehicles. Different types or sizes of aggregates shall not be delivered in one vehicle.

Each type or size of aggregate shall be stored in a separate bin or compartment having a base such that contamination of the aggregate is prevented. Dividing walls between bins shall be substantial and continuous so that no mixing of types or sizes occurs.

The storage of aggregates shall be arranged so that as far as possible rapid drying out in hot weather is prevented in order to avoid sudden fluctuations in water content. Storage of fine aggregates shall be arranged so that they can drain sufficiently before use in order to prevent fluctuations in water content of the concrete.

WATER FOR CONCRETE

Seawater or brackish water containing more than 1000-ppm chloride ion or 2000ppm sulphate ion shall not be used for mixing or curing concrete.

Water shall be clean and free from harmful matter and shall comply with the requirements of BS3148.

The Contractor shall carry out tests in accordance with BS 3148 to establish compliance with the Specification.

CLASSIFICATION OF CONCRETE MIXES

The concrete mixes to be used in the various parts of the works shall be as shown on the drawings and described herein and shall attain the strengths specified herein.

These mixes are of two categories.

Concrete Mix by proportion or prescribed mix.

Guaranteed strength concrete or designed mix.

The class of concrete is denoted by a number for characteristic strength in N/mm^2 . This number may be followed by a number for maximum size of aggregate in millimeter, e.g. class 30-(20) concrete is of compressive strength of $30 N/mm^2$ with maximum size of aggregate of 20mm. The 'characteristic strength' being the 28-day works cube strength below which no more than 5% of the test results may be expected to fall.

A 'designed mix' shall mean a concrete, where the Contractor will be responsible for selecting the mix proportions in accordance with Clause 1704b in order to achieve the required strength and workability and the Engineer will be responsible for specifying the minimum cement content and any other requirements to ensure durability.

A 'prescribed mix' shall mean a concrete, where the Engineer will specify the mix proportions and specifications. The Contractor will undertake to provide a properly mixed concrete as specified in accordance with Clause 1704c. The Engineer will therefore be responsible for

ensuring that the mix prescribed will provide the strength and durability required.

REQUIREMENTS FOR CONCRETE

The Contractor shall submit to the Engineer full details of all materials which he proposes to use for making concrete. No concrete shall be placed in the works until the Engineer has approved the materials of which it is composed. Approved materials shall not thereafter be altered or substituted by other materials without the consent of the Engineer.

The amount of water to be used in any particular class of concrete shall ensure complete hydration and for thorough mixing and subsequent working of the concrete in place, taking into consideration the purpose for which the concrete is intended for and the method of compacting. Therefore for given aggregates the cement content shall be sufficient to provide adequate workability with a low water/cement ratio so that the concrete can be completely compacted with the means available.

The maximum cement content shall not exceed 500kg/m³ or as otherwise described in the contract or directed by the Engineer. Cement contents in excess of 500kg/m³ should not be used unless special consideration has been given in design to the increased risk of cracking due to drying shrinkage in the sections or to thermal stresses in thicker sections. Where the minimum dimension of concrete to be placed at a single time is greater than 600mm and especially where the cement content is likely to exceed 400kg/m³ or more, measures to reduce temperature, such as selection of the cement type with slower release of heat of hydration may be considered.

The minimum cement content to ensure sufficient durability shall not be less than described in Table 1704b-1

MINIMUM CEMENT REQUIREMENT (kg/m³)

Exposure	Nominal maximum size of aggregate (mm)								
	Plain concrete			Reinforced concrete			Prestressed concrete		
	40	20	10	40	20	10	40	20	10
Moderate	220	250	300	260	290	340	300	300	340
Intermediate	240	280	330	290	320	370	310	330	370
Severe	270	310	360	320	400	410	320	400	410

The minimum cement content shown in the above table is required in order to achieve impermeability and durability. In order to meet the strength requirements, higher contents may be required.

The cement content given in table 1704 b-1 may be reduced when trial mixes have verified that concrete with the maximum free water/cement ratio not greater than that given for the particular condition can be consistently produced and that it is suitable for the conditions of placing and compacting.

GUARANTEED STRENGTH CONCRETE (DESIGN MIXES)

The Contractor shall design all the concrete mixes called for on the drawings, making use of the ingredients, which have been approved by the Engineer for use in the works and in compliance with clause 1704 b.

The aggregate portion shall be well graded from the nominal maximum size of stone down to the 150-micron size. The cement content shall be such as to achieve the strength called for in table 1704 c-1 but any case not than the minimum necessary for impermeability and durability

The workability shall be consistent with ease of placing and proper compaction having regard to the presence of reinforcement and other obstructions.

The water/cement ratio shall be the minimum consistent with adequate workability, but in any case not greater than that shown in table 1704 b-1, taking due account of any water contained in the aggregates. The Contractor shall take into account that this requirement may in certain cases require the inclusion of workability agent in the mix.

At least six weeks before commencing placement of concrete in the permanent works trial mixes shall be prepared for each class of concrete specified.

For each mix of concrete for which the Contractor has proposed a design, he shall prepare three separate batches of concrete using the materials which have been approved for use in the works and the mixing plant which he proposes to use for the works. The volume each batch shall be the capacity of the concrete mixer, proposed for full production.

Samples shall be taken from each batch and the slump of the concrete shall be determined. Six test cubes shall be cast from each batch. In case of the concrete having a maximum aggregate size of 40mm or less, 150mm cubes shall be used. In case of concrete containing 75mm or larger aggregate, 200mm cubes shall be used and in addition any pieces of aggregate retained on an 85mm sieve shall be removed from the mixed concrete before casting the cubes

Subject to the agreement of the Engineer, the compacting factor apparatus may be used in place of a slump cone. In this case the correlation between slump and compacting factor shall be established during preparation of the trial mixes.

Three cubes from each batch shall be tested for compressive strength at seven days and the remaining three at 28 days. The density of all the cubes shall be determined before the strength tests are carried out.

The average strength of the nine cubes tested at 28 days shall be not less than the target mean strength shown in table 1704c-1. The Contractor shall also carry out tests to determine the drying shrinkages of the concrete unless otherwise directed by the Engineer. The drying shrinkages shall not be greater than 0.05%.

Based on the results of the tests on the trial mixes, the Contractor shall submit full details on his proposals for mix design to the Engineer, including the type and source of each mix and the results of the tests on the trial mixes. If the Engineer does not agree to a proposed concrete mix for any reason, the contractor shall amend his proposal and carry out further trial mixes. No mix shall be used in the works without the written consent of the Engineer.

CONCRETE CLASSES AND STRENGTHS

Class of concrete	Nominal Strength (N/mm ²)	Maximum nominal size aggregate (mm)	Maximum water/cement ratio		Trial Target Strength (N/mm ²)	mixes Mean	Early works test cubes	
			A	B			Any one cube (N/mm ²)	Ave. of any group of 4 cubes (N/mm ²)
10/75	10	75	0.60	0.55	13.5		8.5	13.3
15/75	15	75	0.60	0.50	21.5		12.8	20.0
15/40	15	40	0.60	0.50	21.5		12.8	20.0
15/20	15	20	0.57	0.50	21.5		12.8	20.0
20/40	20	40	0.55	0.48	31.5		17.0	27.5
20/20	20	20	0.53	0.48	31.5		17.0	27.5
20/10	20	10	0.50	0.48	31.5		17.0	27.5
25/40	25	40	0.52	0.48	36.5		21.3	32.5
25/20	25	20	0.50	0.46	36.5		21.3	32.5
25/10	25	10	0.48	0.46	36.5		21.3	32.5
30/40	30	40	0.50	0.46	41.5		25.5	37.5
30/20	30	20	0.48	0.45	41.5		25.5	37.5
30/10	30	10	0.47	0.45	41.5		25.5	37.5
40/20	40	20	0.46	0.43	51.5		34.0	47.5
40/10	40	10	0.45	0.43	51.5		34.0	47.5

Note: Under water/cement ratio, column A applies to moderate and intermediate Exposure, and column B applies to severe exposure.

PRESCRIBED MIXES FOR ORDINARY STRUCTURAL CONCRETE

Unless otherwise specified, the concrete mix shall be as detailed in table 1704 d-1 which gives the weights of cement and total dry aggregates in kg to produce approximately one cubic metre of fully compacted concrete together with the percentages of sand in total dry aggregates.

Provided that the Engineer is satisfied that the materials used are in accordance with this specification and that correct methods of manufacture and practices of handling raw materials and manufacture of concrete have been used, the compliance of a prescribed mix for ordinary concrete should, unless otherwise specified, be judged on the basis of the specified mix proportions, workability and strength.

The Engineer shall arrange for preliminary strength tests to be carried out, unless satisfactory evidence is available from previous use of the mix. He shall also arrange for strength tests to be carried out during the progress of the work in accordance with clause 1704e to satisfy himself that the mix proportions are suitable.

The actual batch weights shall be calculated to suit the size of the mixer for the appropriate grade of concrete. Allowance shall be made for moisture content typical of the aggregates

being used.

Where permitted, the aggregates for grades 10 and 15 may be batched by volume, in which case the bulk density of the damp aggregate may be taken as 1500kg/m³. One whole bag of cement may be taken as weighing 50 kg. With volume batching, stout gauge boxes approved by the Engineer shall be used.

Gauge boxes shall be soundly constructed of timber or steel to contain exactly the volume of the respective materials required for one batch of each mix. They shall have closed bottoms and be of such proportions that their depth exceeds the cube root of their volume. No measurements shall be made by estimating fractional parts of a box and all gauge boxes shall be completely filled and the top struck off level. Consolidation of aggregates in gauge boxes will not be allowed.

Prescribed mixes shall not be used as structural concrete for the construction of the Jetty, but may be used for other secondary purposes with the approval of the Engineer.

PRESCRIBED MIXES FOR 1m³ ORDINARILY STRUCTURAL CONCRETE

Grade of Concrete	Normal max. Size of aggregate (mm)						
		40		20		10	
	Limits to slump (mm)	50-100	100-150	25-75	75-125	15-25	25-50
10	Cement(kg)	210	230	240	260	-	-
	Total Aggr(kg)	1900	1850	1850	1800	-	-
	Sand (%)	30-40	30-45	35-45	35-50	-	-
15	Cement(kg)	250	270	280	310	-	-
	Total Aggr(kg)	1850	1800	1800	1750	-	-
	Sand (%)	30-40	35-45	35-45	35-50	-	-
20	Cement(kg)	300	320	320	350	360	410
	Total Aggr(kg)	1850	1750	1800	1750	1750	1650
	Coarse Sand (%)	35	40	40	45	50	55
	Medium sand(%)	30	35	35	40	45	50
	Fine Sand (%)	30	30	30	35	40	45
25	Cement(kg)	340	360	360	390	400	450
	Total Aggr(kg)	1800	1750	1750	1700	1700	1600
	Coarse Sand (%)	35	40	40	45	50	55
	Medium sand(%)	30	35	35	40	45	50
	Fine Sand (%)	30	30	30	35	40	45
30	Cement(kg)	370	390	400	430	460	510
	Total Aggr(kg)	1750	1700	1700	1650	1650	1550

Coarse Sand (%)	35	40	40	50	50	55
Medium sand(%)	30	35	35	40	45	50
Fine Sand (%)	30	30	30	35	40	45

The proportion of cement to fine plus coarse aggregate measured separately shall not be altered, but the proportion of fine to coarse aggregates shall be varied to suit the type of grading of aggregates so as to produce, except where otherwise required, concrete of the maximum density consistent with proper workability and complying with the cube strength requirements.

Three cubes from each batch shall be tested for compressive strength at seven days the remaining three at 28 days. The density of all the cubes shall be determined before the strength tests are carried out.

The average strength of the nine cubes tested at 28 days shall be not less than the target mean strength shown in table 1704c-1. The Contractor shall also carry out tests to determine the drying shrinkages of the concrete unless otherwise directed by the Engineer. The drying shrinkages shall not be greater than 0.05%.

Based on the results of the tests on the trial mixes, the Contractor shall submit full details on his proposals for mix design to the Engineer, including the type and source of each mix and the results of the tests on the trial mixes.

If the Engineer does not agree to a proposed concrete mix for any reason, the Contractor shall amend his proposal and carry out further trial mixes. No mix shall be used in the works without the written consent of the Engineer.

QUALITY CONTROL OF CONCRETE

The proportions of materials used in the works shall follow the proportions found to be acceptable in the trial mixes. The concrete shall be prepared under the control of a competent person, and dose control kept over quantities, and water content, care being taken to make due allowance for variations in the moisture content of the materials.

All samplings and testing of concrete shall be carried out in accordance with KS 02595. Compliance with the specific characteristic strength shall normally be based on tests made on cubes at an age of 28 days.

Unless otherwise directed by the Engineer, the rate of sampling shall be as given in the table below, but not less than one sample shall be taken on each day the concrete of that grade is used. A higher rate of sampling and testing should be adopted at the start of the works to establish the level of quality or during periods of production, when quality is in doubt.

RATES OF SAMPLING AND TESTING

Volume of concrete at risk	Sample from one batch selected at random and at intervals such that each sample represents an average volume of not more than:
30m ³	10 m ³ or 10 batches – Highly stressed structural course
60 m ³	20 m ³ or 20 batches – Normal structural concrete
150 m ³	50 m ³ or 50 batches – Mass concrete

For each class of concrete in production at each plant for use in the works, samples of concrete shall be taken at the point of mixing or of deposition as instructed by the Engineer, all in accordance with the sampling procedures described in sub-clause 1704 e

Six 150mm or 200mm cubes as appropriate shall be made from each sample and shall be cured and tested all in accordance with KS 02-595, two at seven days and the other four at 28 days.

The slump of the concrete shall be determined for each batch from which samples are taken and in addition for other batch at the frequency instructed by the Engineer.

The slump of the concrete in any batch shall not differ from the value established by the trial mixes by more than 25mm or one third of the value, whichever is the greater.

The air content of air-entrained concrete in any batch shall be within 1.5 units of the required value and the average value of four consecutive measurements shall be within 1 unit of the required value, expressed as a percentage of the volume of freshly mixed concrete.

Until such time as sufficient test results are available to apply the method of control described in sub-clause 10 below, the compressive strength of the concrete at 28 days shall be such that no single result is less than the value shown in table 1704 c-1 under the heading early works test cubes and also that the average value of any four consecutive results is not less than the value shown in table 1704 c-1 under the same heading. When test cube results are available for at least 40 consecutive batches of any class of concrete mixed in any one plant, compliance with the specified characteristic strength will be assumed, if the following requirements are met:

The average strength determined from any group of four consecutive test cubes exceeds the specified characteristic strength by not less than 0.5 times the 'current margin'.

Each individual test result is greater than 85% of the specified characteristic strength.

The 'current margin' shall normally be taken as 1.64 times the standard deviation of cube tests on at least 40 separate batches of the same specification produced during concreting of the last six months, but not less than 5N/mm² for grade 15 or 7.5N/mm² for grade 20 or above.

If any one cube result fails to meet requirement 10(b), then that result will be considered to represent only the particular batch of concrete from which that cube was taken.

If average strength of any group of four consecutive test cubes fails to meet requirement 10(a), then all the concrete in all the batches represented by these cubes shall be deemed not to comply with the strength requirements. For the purposes of this sub-clause the batches of concrete represented by a group of four consecutive test cubes shall include the batches from which samples were taken to make the first and the last cubes in the group of four, together with all the intervening batches.

The action to be taken in respect of the concrete which is represented by the test cubes which fail to meet either of the requirements must be determined by the Engineer. This may range from qualified acceptance in less severe cases to rejection and removal in the most severe

cases.

The Engineer may wish to carry out tests on the hardened concrete in the structure. These may include non-destructive methods or the taking of cored samples. The results of any such tests should not nullify the establishment of non-compliance with the testing plan, provided that this was based on valid cube test results.

If the Contractor disputes the results of such tests, he may arrange at his own expense to have confirmatory tests made on cubes of set concrete cut from that portion of the works in dispute. Such tests shall be carried out by an agreed authority having suitable facilities.

READY MIXED CONCRETE

Ready mixed concrete as defined in BS 1926, batched off the site, may be used only with the agreement of the Engineer and shall comply with the requirements of the Contract. Mixing at a central plant shall conform to the requirements for mixing at the site. The organization supplying concrete shall have sufficient plant capacity and transporting to ensure continuous delivery at the rate required.

The concrete shall be carried in purpose made agitators operating continuously or truck mixers. The concrete shall be compacted in its final position within 75 minutes of the introduction of cement to aggregates unless a longer time is agreed by the Engineer.

The time of such introduction shall be recorded on delivery note together with the weight of the constituents of each mix. When truck mixed concrete is used, water shall be added under supervision either at the site or at the central batching plant as agreed by the Engineer, but in no circumstances shall water be added in transit. Unless otherwise agreed by the Engineer, truck mixer units and their mixing and discharge performance shall comply with the requirements of BS 4251. Mixing shall continue for the number and rate of revolutions recommended in accordance with BS 4251.

Each mixer, agitator and truck shall have attached thereto in a prominent place a metal plate or plates on which the equipment is designed, the manufacturer's guaranteed capacity of the drum, and the speed of the rotation of mixing drum or blades.

Approval to the use of ready mixed concrete may be withdrawn, if the Engineer is not satisfied with the control of the materials being used and the control during mixing.

MEASURING MATERIALS FOR CONCRETE

The Contractor shall provide adequate supervision to ensure that, the required standard in control of materials and workmanship are maintained.

Cement shall be stored in dry weatherproof sheds with raised floor or in silos. If in sheds each consignment shall be kept separate and distinct. Any cement that has become injuriously affected by damp or other causes shall be removed from the site immediately

Single sized coarse aggregates and sand shall be used unless otherwise authorized by the Engineer. They shall be stored in separate hoppers or different stacks which shall be separated from each other.

All aggregates shall be kept free from contact with deleterious matter with adequate provision for drainage and shall be stored and handled so as to avoid segregation.

The overall grading of the aggregates shall be such as to produce concrete of the specified quality that readily will work into position on without segregation and without use of excessive water. The overall grading shall be controlled throughout the work so that it conforms closely to that assumed in the selection of the mix proportions. Each delivery shall be inspected and if required by the Engineer, tested in accordance with KS 02-1238.

The quantities of cement, sand and the various sizes of coarse aggregate shall be measured by weight, unless otherwise authorised by the Engineer.

The Contractor shall be responsible for calculating the correct batch proportions for each mix ensuring that they are used and that the quality of the concrete as placed complies with the requirement of the specification.

The Engineer may approve or direct the variation of the ratio of fine to coarse aggregates specified, but always in such a manner that the total volume of aggregate for 50kg of cement shall remain constant. This shall not be considered a variation of the rates and prices in the bill of quantities.

A separate weighing machine shall be provided for weighing the cement. Alternatively the cement may be measured by using a whole number of bags in each batch.

The quantity of water shall be measured and also any admixture to be added. If solid, the admixture shall be measured by weight. All measuring equipment shall be maintained in clean and serviceable condition. Its accuracy shall be checked over the range in use when set up at site, and maintained thereafter and periodically rechecked.

The accuracy of measuring equipment shall fall within $\pm 3\%$ for the quantity of cement, water or total quantity of aggregate and within $\pm 5\%$ for the quantity of admixtures. The minimum size of mixer shall allow for at least one bag of cement.

The mixing time shall be not less than 2 minutes after all the ingredients are present in the drum. Mixers that have been out of use for more than 30 minutes shall be thoroughly cleaned before any fresh concrete is mixed.

The water content of each batch shall, if necessary and subject to the approval of the Engineer, be adjusted to produce a concrete of the specified workability.

MIXING OF CONCRETE

All concrete shall be mixed in mechanically operated mixers of the batch-type, complying with the requirements of BS 1305. When permitted by the Engineer, batches not exceeding 0.25m^3 may be mixed by hand methods in accordance with provisions under Clause 1708.

Concrete mixers may be of the revolving drum or the revolving blade type and the mixing or blades shall be operated uniformly at the mixing speed recommended by the manufacturer.

The pickup and throw over blades of mixers shall be restored or replaced when any part or section is 25mm or more below the original height of the manufacturer's design. Mixers and agitators which have an accumulation of hard concrete or mortar shall not be used. Mixers shall be fitted with an automatic recorder registering the number of batches discharged. The temperature of the materials as charged into the mixer shall be such that the temperature of the mixed concrete at the time it is placed in final position does not exceed 30degr.C

The batch shall be so charged into the mixer that some water will enter In advance of cement and aggregates- All water shall be in the drum by the end of the first $\frac{1}{4}$ of the specified mixing time. Mixing shall continue for at least 90 seconds, after all materials including water, which shall be added last of all, have been passed into the drum and before any portion of the batch is discharged.

Cement shall be batched and charged into the mixer by means that will not result in a loss of cement due to the effect of wind or in accumulation of on surfaces of conveyors or hoppers, or in the other conditions which reduce or vary the required quantity of cement in the concrete mixture.

The total elapsed time between the intermingling of damp aggregates and cement and the start of mixing shall not exceed 30 minutes. The concrete shall be discharged onto a watertight platform or into watertight containers for removal and deposition as specified hereafter. The mixer drum shall be completely empty before recharging. Should there for any reason be a stoppage of greater than 10 minutes duration, the drum of the mixer and all handling equipment shall be thoroughly washed out with clean fresh water and rendered free from hardened concrete before mixing is resumed.

Uniformity of concrete mixes will be determined by comparing slump tests on two samples of mixed concrete from the same batch or truck load. Differences shall not exceed 25mm. Variations in the proportion of coarse aggregate will be determined from the results of tests from two samples of mixed concrete from the same batch or truck load. The difference between the two results shall not exceed 100kg/m³. .

Concrete shall be mixed in such quantities that any batch can be placed in the works within 30 minutes. The retamping of concrete which has received its initial set will not be permitted under any circumstances. Mixing shall be performed at a point not farther away than 300m by haul route from the position of placement of the concrete.

Any mix, considered to be unsatisfactory by the Engineer for any reason, will be discharged to waste at Contractor's expense, as and where directed by the Engineer, will clear of all mixing and placing of concrete.

Uniformity of concrete mixes will be determined by comparing slump tests on two samples of mixed concrete from the same batch or truck load. Differences shall not exceed 25mm. Variations in the proportion of coarse aggregate will be determined from the results of tests from two samples of mixed concrete from the same batch or truck load. The difference between the two results shall not exceed 100kg/m³. .

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Any mix, considered to be unsatisfactory by the Engineer for any reason, will be discharged to waste at Contractor's expense, as and where directed by the Engineer, will clear of all mixing and placing of concrete.

MIXING OF CONCRETE BY HAND

Where it is not practical to employ machine mixing and approval has been obtained from the Engineer, concrete shall be mixed by hand as near as practicable to the site where it is to be deposited. Hand mixed concrete shall be made in batches of not more than 0.25 m³.

The mixing shall be done on a clean watertight, non-absorbent platform approve by the Engineer. The cement and fine aggregate shall then be added and mixed dry until the mixture is thoroughly blended and uniform in colour. The coarse aggregate shall then be added and mixed until the coarse aggregate is uniformly distributed throughout the batch. The correct quantity of water shall be added using a can with a nose nozzle and the mixing continued until the entire batch of concrete is homogenous and has the desired consistency.

Mixing shall be carried out until the whole batch has been turned at least three times dry and three times wet.

For hand mixing the cement content shall be increased by 10% over that required for machine mixing.

The platform shall be emptied before a subsequent batch is mixed and thoroughly cleaned, if not in use for more than 30 minutes, before the next batch is prepared.

TRANSPORT OF CONCRETE

Concrete shall be taken from the place of mixing to the place of deposition by means of barrows, carts, chutes or by any other approved method which will prevent the drying out and consolidation of the concrete, the segregation and loss of the ingredients and which are sufficiently rapid to ensure that the concrete does not commence to set before it is finally compacted in position.

During transportation the concrete shall be protected from any adverse effects of sun, wind and rain. The concrete shall be deposited as near as possible to its final position in the works and no concrete shall be dropped freely or deposited by means of mutes through a depth exceeding 1.5m.

Chuting shall be approved by the Engineer before use and shall not exceed a 45 degree slope. It is to be dean and free at all times from the gradual deposition of concrete. All mixers, barrows, spades and other mixing and distributing equipment shall be kept free of partly set concrete, which shall not be used in the works.

Concrete shall be guarded from harmful vibration and vibration during the setting period and transportation and similar activities executed on and adjacent to such works will be forbidden. No planks or ways for skips, etc shall be supported on either formwork or reinforcement.

In no case shall more than 30 minutes elapse between mixing and placing of any batch of concrete in its final position.

PLACING OF CONCRETE

No concrete shall be placed in any part of the works until written permission to do so has been obtained from the Engineer. Well in advance of the intention to place concrete, the contractor

shall forward to the Engineer for his approval full information about the order in which he proposes to place concrete in the various parts of the works, the height of each lift of concrete, details of the shuttering being proposed to employ with relevant calculations and positions of all construction joints.

During hot weather the Contractor shall take all measures necessary to ensure that the temperatures of concrete at the time of placing in the works does not exceed 30 degrees centigrade and that the concrete does not lose any moisture during transporting and placing. Such measures may include, but may not necessarily be limited to shielding aggregates from direct sunshine, use of mist water spray on aggregates and sun shields on the mixing plants and transporting equipment.

Areas in which concrete is to be placed shall be shielded from direct sunshine. Rock or concrete surfaces shall be thoroughly wetted to reduce absorption of water from the concrete placed on or against them.

The entire area of the bottom of the excavation shall be blinded with a layer of class 15 (mix 1:3:6) concrete of a minimum thickness of 50mm. The concrete shall be as dry as practicable and shall be well tamped into the ground. The surface of the blinding layer shall be spade finished and the specified cover of concrete under the reinforcement shall be provided above the blinding layer.

The area on which any concrete is to be placed must be made and maintained free from standing water during concreting operations, unless otherwise approved. Running water crossing or entering such areas must be brought under control before concreting proceeds. No pumping that may adversely affect the concrete being placed shall be done while placing, or within twenty-four hours of placing the concrete.

The arrangements for placing concrete are to be such that in all cases the materials may be conveniently handled and placed in the required position without re-handling or segregation. All concrete must be placed in position as rapidly as possible and in any case before it has taken an initial set.

For members involving 'vertical' placing of the concrete (e.g. walls) each lift shall be deposited in layers extending for the full width between end shuttering and of such depth that each layer can be easily and effectively integrated with the layer below by the means of compaction being employed. The layers shall be placed horizontally. Forms for walls, columns and other thin section of significant height shall be provided with openings or other devices that will permit the concrete to be placed in a manner that will prevent segregation.

For members involving 'horizontal' placing of the concrete (e.g. deck slabs) the concrete shall be placed along the line of the starting point in such quantities as will allow the member to be cast to its full depth along the full width between side shuttering and then along its entire front, parallel to the starting line.

Concrete in reinforced concrete work shall be deposited in small quantities in a plastic state with a water cement ratio such as to give the specified strength. The depositing of concrete in individual members shall be continued without stoppage up to an approved prearranged construction joint or until the member is completed and shall be finished off in such a manner

that the junction of member shall be monolithic.

All members shall be concreted at such a rate as will eliminate any Possibility of fresh batches of concrete being deposited immediately adjacent to batches which have commenced to set. Mass concreting shall be carried out in sections previously ordered or approved by the Engineer and shall proceed continuously in each section until completed and no interval shall be allowed to lapse while the work is in progress.

PLACING OF CONCRETE UNDER WATER

Concrete may only be placed under water where indicated on the drawings or with the prior approval of the Engineer who shall likewise approve the method to be used and the precautions necessary to prevent loss of material.

The concrete quality shall be Class 25(20) or as specified on the drawings. The quantity of cement in any concrete placed under water shall, at the Contractor's expense, be increased by 20% above the cement content, first batch which shall have the cement content increased by 40%. If possible rounded aggregates with the addition of approved plasticiser with high percentage of fines should be used to obtain plastic mix. The slump of the concrete should be not less than 25mm.

The formation shall be cleaned by the diver and all silt removed by airlift or other approved methods. Care should be also taken to ensure that no silt or laitance is trapped in the corners. Just before placement of the concrete, reinforcement shall be cleaned by the diver by air lift, or other approved methods of all silt, trapped debris, etc.

A tremie shall consist of a watertight tube having a diameter of not less than 200mm with a hopper at the top. The tube shall be equipped with a device that will prevent water from entering the tube whilst charging the tube with concrete. The tremie shall be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete.

The tremie shall be filled by a method that will prevent washing of the concrete. The lower ends of the tremie pipes shall always be kept before the surface of the wet concrete already deposited and shall contain sufficient concrete to prevent any water entry. Where a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete.

The flow shall be continuous until the work is completed and the resulting concrete shall be monolithic and homogeneous. The raising speed of the cast concrete surface shall be at least 300mm/hour. Maximum distance between tremies, when concreting extensive areas, shall be 4m.

No concrete shall be allowed to fall through water at any time. Concrete shall be placed evenly over the whole area enclosed by the shuttering and must not be raked over, only the minimum of screeding being allowed once the concrete has been placed.

COMPACTION OF CONCRETE

After the concrete has been placed in position it shall be compacted in such a manner as to produce a dense uniform mass. Compaction of all reinforced concrete work shall be by mechanical vibrators. Elsewhere it may be effected by either hand or mechanical tools. All compacting tools must be approved by the Engineer before being used in the works.

Where vibrators are used, they shall be of the rotary out-of-balance type or the electromagnetic type and shall operate at a frequency of not less than 8000 cycles per minute. The vibrators shall be disposed in such a manner, that the whole of the mass treatment shall be adequately compacted at a speed commensurate with the supply of concrete from the mixers. Vibration shall continue until all air has been expelled. At least two vibrators shall be available at the site of a structure in which more than 20m³ of concrete is to be placed.

The concrete shall be worked up against whatever surface it adjoins and compacted to such a degree, that it reaches its maximum density as a homogenous mass, free from air and water holes, and penetrates to all corners of the moulds and shuttering and completely surrounds the reinforcement. Care shall be taken to ensure that neither hand punners nor mechanical vibrators or shock come into contact with the formwork, reinforcement, nor any embedded fittings and to prevent the operation of compaction from transmitting any harmful vibrations or shocks to the use of external vibrators for compacting concrete will be permitted when the concrete is inaccessible for adequate compaction, provided the forms are constructed sufficiently rigid to resist displacement or damage from external vibration.

CURING OF CONCRETE

Concrete shall be protected during the first stage of hardening from loss of moisture and from the development of temperature differentials within the concrete sufficient to cause cracking. The methods used for curing shall not cause damage of any kind to the concrete.

Curing shall begin as soon as surface of the concrete has hardened sufficiently. The concrete shall be kept continuously wet by the application of water for a minimum period of 7 days after the concrete has been placed. Cotton mats, rugs, carpets or each or sand blankets may be used as a curing medium to retain the moisture during the curing period.

The entire surface of the concrete shall be kept damp by applying water with a nozzle preferably in form of a mist so as to not damage the surface until the surface is covered with the curing medium. The moisture from the nozzle shall not be applied under pressure directly upon the concrete and shall be allowed to accumulate on the concrete in a quantity sufficient to cause or wash the surface.

Where the concrete to be cured is enclosed by shuttering, the shuttering shall be covered with clean sacks or hessian which must be kept continuously in a wet condition. When the shuttering is removed, the damp hessian or sacks shall be hung directly around the concrete member and kept continuously wet by spraying with clean water. On no account must the surrounding sacks, hessian, etc. be allowed to dry during the curing period.

Surfaces of newly placed concrete to be cured by the membrane method shall be kept moisture wet until curing the compound is applied, which shall not be done until all patching or surface finishing has been complete. The water shall be applied with a nozzle as described above.

The curing compound shall be delivered to the work in ready mixed form. At the time of use the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. The compound shall not be diluted or altered in any manner. The curing compound shall be applied to the exposed surface at a uniform rate of 0.3 litres/m². Curing compound used on the surface exposed to the sky shall contain sufficient finely divided aluminium in suspension to produce a complete coverage at the rate recommended by the manufacturer.

Curing compounds shall become stable and impervious to evaporation of water from the concrete surface within 60 minutes of application. The material shall not react chemically with the concrete and shall not crack, peel or disintegrate within three weeks after application. Should the film of curing compound be damaged from any cause, the damaged portions shall be repaired immediately with additional compound.

If instructed by the Engineer, the Contractor shall, in addition to the curing provisions set out above, provide a suitable form of shading to prevent the rays of the sun reaching the Concrete for at least the first four days of the curing period.

No separate payment will be made for complying with the provisions of this clause except for the specified curing compounds. The costs involved shall be included in the rate for concrete.

Layers shall not be placed so that they form feather edges, nor shall they be placed on a previous layer which has taken its initial set in order to comply with this requirement a layer may be started before completion of the preceding layer.

Great care shall be taken to avoid disturbing partially set concrete in any way. The Contractor shall not permit his workmen to walk over it and shall so arrange his operations that the partially set concrete is not subjected to unnecessary loads, shocks or vibrations from plant and labour operating in the immediate vicinity.

Should any unforeseen occurrence result in a stoppage of concreting for such time as might allow the concrete already placed to begin to set before the next batches can be compacted into place, the Contractor shall immediately insert at his own cost, a proper end-shutter to form a tongue and groove construction joint, as specified, normal to the work at that point, which will ensure that the section already cast is formed completely in accordance with this specification. Any additional reinforcement required as a result of the joint shall be provided by Contractor at his own expense.

Before concreting is resumed after such an interruption, the contractor shall cut out and remove all damaged or uncompacted feather edges or any other undesirable features and shall leave a clean, sound surface against which fresh concrete may be placed.

All foundation bolts, fittings, etc. are to be either built into the works as concreting proceeds by supporting them from the formwork in their correct position, or grouted into recesses cast

in the work as specified or as approved by the Engineer. Recesses to accommodate such items shall be cast against properly constructed formwork and in no circumstances shall they be formed by cutting out green concrete. Similarly, no fittings shall be positioned in the works by securing to partially set concrete.

No vehicle will be allowed on any span until after the concrete in the span has attained a compressive strength of not less than twice the design strength and loads of any character having a total weight in excess of 2 tons will not be permitted on any span, until the concrete in the span has attained a compressive strength of at least 210kg/cm^2 .

Concreting may be continued during showers of a light drizzling nature, provided the run-off from elsewhere is intercepted. In the likelihood of a heavy rainfall developing, the Engineer may permit concreting to continue only if adequate protection is provided and the water/cement ratio adjusted to offset the additional moisture in the aggregates.

After concrete in any part of the area has been placed, the selected curing process shall be commenced as soon as possible. If any interval occurs between completion of placing and start of curing, the concrete shall be closely covered during the interval with polythene sheeting to prevent loss of moisture.

FINISHES ON UNFORMED SURFACES

Horizontal or nearly horizontal surfaces which are not cast against formwork shall be finished to the class shown on the drawings and defined hereunder.

Class UF 1 finish

All surfaces on which no higher class of finish is called for on the drawings or instructed by the Engineer shall be given a UF 1 finish. The concrete shall be leveled and screed to produce a uniform

Class UF 2 finish

This is a floated finish for roof or floor slabs and other surfaces where a hard trowelled surface is not required. The surface shall first be treated as a Class UF 1 finish and after the concrete has hardened sufficiently, it shall be floated by hand or machine sufficient only to produce a uniform surface free from screed marks.

Class UF3 finish

This is a hard trowelled surface for use where weather resistance or Appearance is important, or which is subject to high velocity water flow. The surface shall be floated as for a UF2 finish, but to the tolerance stated below. When the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, it shall be steel-trowelled under firm pressure to produce a dense, smooth uniform surface, free from trowel marks.

Surface tolerance for unformed concrete shall be as shown on table 1714- 1. Where dimensional tolerance are given on the drawing they shall take precedence.

SURFACE TOLERANCE (mm)

	Sudden change of level in surface	Gradual change of surface as measured by 3m straight edge	Difference in level between 3m straight edge and the specified surface level
UF 1	Not applicable	Nil	+20-10mm
UF 2	Nil	10mm	+20-10mm
UF 3		5mm	12.5 of -7.5mm

CEMENT MORTAR

Mortar shall be composed of fine aggregate complying with Clause 1703c and ordinary Portland cement complying with KS 02-21. The mix proportions shall be as stated on the drawings or if not stated, shall be one part of cement to two parts of fine aggregate by weight

Small quantities of mortar may be hand mixed but for amounts over 0.5m³ a mechanical mixer shall be used. Mixing shall be done in an approved mixer, the amount of water added being just sufficient to give consistency and workability desired for the use to which the mortar is to be put, but in any case the water/cement ratio shall not be more than 0.5.

Where hand mixing of mortar is permitted the dry sand and cement shall first be mixed together by running over with a clean shovel or trowel on a clean steel platform or other approved surface until a mixture of uniform colour has been obtained. Water shall be added, a little at a time, the mixture being turned over after each addition until a homogenous paste has been obtained. This process shall be repeated until the required consistency has been obtained.

Cement mortar shall be made in suitable small quantities only as and when required and any mortar which has begun to set or which has been mixed more than 30 minutes before placing shall be rejected.

CONCRETE FOR SECONDARY PURPOSES

Non structural concrete shall be composed of ordinary Portland cement complying with KS 02-21 and aggregates complying with KS 02-95 including all-in aggregate within the grading limits of table 3 of KS 02-95. The weight of mixed cement mixed with 0.3m³ of combined or all-in aggregate shall not be less than 50kg. The maximum aggregate size shall be 40mm nominal.

The concrete shall be mixed by machine or by hand to uniform colour and consistency before placing. The quantity of water used shall not exceed that required to produce a concrete with sufficient workability to be placed and compacted where required.

No fines concrete is intended for use where a porous concrete is required. The mix shall consist of ordinary Portland cement complying with KS 02-21 and aggregate complying with KS 02-95. The aggregate size shall be 40mm to 10mm only. The weight of cement mixed with 0.3m³ of aggregate shall not be less than 50kg. The quantity of water shall not exceed that required to produce a smooth cement paste which will coat evenly the whole of the aggregate.

CONSTRUCTION JOINTS

Whenever concrete is to be bonded to other concrete which has hardened, the surface of contact between the Sections shall be deemed a construction joint. All joints in all classes of work shall be conveniently rebated to form a key by inserting a tongue and groove against which concrete can be properly compacted.

Where construction joints are shown on the drawings, the Contractor shall form such joints in those positions. The location of joints which the Contractor requires to make for the purpose of construction shall be subject to the agreement of the Engineer. Construction joints shall be in vertical or horizontal planes except in sloping slabs, where they shall be normal to the exposed surface or elsewhere, where the drawings require a different arrangement

Construction joints shall be so arranged as to reduce to a minimum the effects of shrinkage in the concrete after placing, and shall be placed in the most advantageous positions with regard to stresses in the structures and the desirability of staggering joints. Generally, construction joints shall be located at points, where shear or tensile stresses are at minimum.

Feather edges of concrete at joints shall be avoided and any feather edges which may have formed, where reinforcing bars project through a joint, shall be cut back until sound concrete has been reached.

The intersections of horizontal or near horizontal joints and exposed faces of concrete shall appear as straight lines produced by use of a guide strip fixed to the formwork at the top of the concrete lift, or by other means acceptable to the Engineer.

Construction joints formed as free surfaces shall not exceed a slope of 20% from the horizontal.

The surface of the fresh concrete in horizontal or near horizontal joints shall be thoroughly cleaned and roughened by means of high pressure water and air jets when the concrete is hard enough to withstand the treatment without the leaching of cement. The surface of vertical or near vertical joints shall be similarly treated if circumstances permit the removal of formwork at a suitable time.

Where concrete has become too hard for the above treatment to be successful, the surface whether formed or free is to be thoroughly scabbled by mechanical means or wet sand blasted and then washed with clean water. The indentations produced by scabbling shall be not less than 10mm deep and shall not extend closer than 40mm to a finished face.

If instructed by the Engineer the surface of the concrete shall be thoroughly brushed with a thin layer of mortar composed of one part of cement to two parts of sand by weight and complying with clause 1704b.

The mortar shall be kept just ahead of the fresh concrete being placed and the fresh layer of concrete shall be thoroughly and systematically vibrated to full depth to ensure complete bond with the adjacent layer.

No mortar or concrete may be placed in position on or against a construction joint until the joint has been inspected and passed by the Engineer.

EXPANSION JOINTS

The size of the gap shall be compatible with the mean temperature at the time of the installation, which shall be carried out earliest possible in the morning with the expected ambient temperature of structure in region of +20°C.

In order to attain this temperature it may be necessary to spray structure with fine mist of water. The final arrangement to determining the temperature shall be made with the Engineer on site.

The position of bolts cast into concrete and holes drilled in plates shall be accurately determined. The mixing application and curing of all proprietary materials shall comply with the manufacturer's requirements.

During placing and hardening of concrete or mortar under expansion joint components relative movement shall be prevented between them and the supports to which they are being fixed. When one haft of the joint is being set other half shall be completely free from longitudinal restraint.

Screw threads shall be kept clean and free from rust. Ramps shall be provided and maintained to protect all expansion joints from vehicular loading. Vehicles shall cross the joints only over the ramps until Engineer permits their removal.

EXPANDED RUBBER SEALANTS

The materials shall comply in all respects with the ASTM Specification D471 and D2628. The size of the sealant shall be determined from following parameters.

- a) Greatest size of the opening $0.9BN$.
- b) Smallest size of the opening $0.55BN$.
- c) Smallest working opening $0.35BN$ where BN = Breadth of unstressed sealant

The sealants shall be installed strictly with the manufacturer's instructions with the particular attention to the anchorages. The sealants may have to be precompressed by external means such as clamps before installation.

The installation shall be carried out early in the morning with the ambient temperature of the structure being 20°C.

The surfaces of the steelwork in contact with sealant shall be free of all organic and inorganic debris and impurities.

The amount of pre-compression shall be agreed with the Engineer on site.

Unit measurement of sealant shall be linear meter. The rates shall include for supply, transportation, installation anchor bolts, fixings sealing and all expenses, taxes (except VAT), duties and profits and all other items necessary for satisfactory incorporation in works.

JOINT SEALING COMPOUND

Poured joint sealing compound shall consist of hot or cold poured material as agreed with the Engineer on site.

Hot poured compound shall comply with the requirements of B.S. 2499. Two-component cold poured compound shall comply with the requirements of U.S. Federal Specification SS-S-170 and test certificates prepared in an approved laboratory shall be supplied by the Contractor to show that it complies with the following requirements.

Test

Requirements

Cone penetrating-150g for 5 seconds at Standard grease cone.

Penetration to be not less than 25°C. Not more than 27.5mm.

Flow on a plane inclined at 75° to Horizontal, 5 hours at 60°C

Flow not to exceed 20mm.

Bond 25mm wide joint extended in 3 to 12.5mm per hour at 3 cycles of extension and compression opening more than 6mm deep.

Not more than one specimen Develop a crack, separation or other

In addition to the materials complying with US Specification SS-170, the Engineer may approved the use of the alternative materials provided these meet the other requirements of this clause relating to coldpoured joint sealing compounds.

The treatment of the surfaces to receive sealant shall be carried out strictly with the suppliers' instructions.

The pouring of the sealant shall be carried out at mean temperature of 20 ° -22°C, unless otherwise agreed with the Engineer on site. The measurement of the sealant shall be linear meter.

The rates shall include for supply, transportation, installation anchor bolts and fixings, sealing, and all expenses, taxes, duties and profits and all other necessary items for satisfactory incorporation in works.

JOINT FILLER

1. Joint filler shall be either
 - a) Flexcell, as manufactured by Expandite Limited
 - b) Korkpak, as manufactured by Services Limited
 - c) Or similar approved material

Joint filler shall be maintained in position during construction by use of a suitable adhesive as

recommended by the manufacturer or by approved mechanical means.

CEMENT GROUT

Cement grout shall consist of neat cement mixed with sufficient water to produce a freely running mixture. Normally this will comprise one part by volume of cement to one and a half parts by volume of water. In situations where it is possible and desirable in the opinion of the Engineer, to mix fine sand with grout, the proportions of sand to cement will be determined by the Engineer. The grout shall be used whilst fresh and within half an hour of mixing,

Any concrete area to be in contact with grout shall be cleaned of all loose or foreign material that would in any way prevent bond between the mortar and the concrete surfaces and shall be kept thoroughly moistened with water for a period of not less than 24 hours immediately prior to placing the grout.

The grout shall completely fill and shall be tightly packed into recesses, holes, etc. After placing, all surfaces of grout shall be cured by the water method for a period of not less than 3 days.

FORMWORK FOR STRUCTURES

Formwork shall include all temporary forms required for forming the concrete together with all temporary construction required for the support. All formwork shall be so constructed that there shall be no loss of material from the concrete and shall be of such quality and strength as will ensure rigidity throughout the placing, compaction and setting of the concrete. After hardening, the concrete shall be in the position and of the shape, dimensions and surface as described in the contract.

False work or centering shall be founded upon a solid footing safe against undermining and protected from softening. Falsework which cannot be founded on satisfactory footing shall be supported on piling which shall be spaced, driven and removed in a manner approved by the Engineer.

The design of the forms shall also take into account the effect of vibration of concrete as it is placed. They shall be built mortar tight and of sufficient rigidity to prevent distortion due to the pressure of concrete and other loads incidental to the construction operations and so as to prevent warping and the opening of joints due to shrinkages of the timber.

The form shall be so constructed that they shall be capable of being removed without shock, vibration or damage to the concrete. All forms for beams and similar members shall be designed and constructed so that the sides may be removed without disturbing the bottom boards or supports thereof. The supporting struts shall be adjusted and securely fixed in position by approved means

Struts and props shall be fitted with double hardwood wedges or other approved devices, so that the moulds may be adjusted as required and eased gradually after casting the concrete. Wedges shall be 'Spiked' into position, and any adjusting device locked before the concrete is cast.

All forms for the outside surfaces shall be constructed with stiff wales at right angles to the studs

and all form clamps shall extend through and fasten such wales. When removable bolts are used they shall be greased with water dissoluble grease to allow for easy withdrawal. No form of fixing passing through the concrete shall be used in concrete slabs.

Form clamps, bolts and anchors shall be used to fasten forms. The use of wire ties to hold forms in position during placing of concrete will not be permitted. Bolts or dampers shall be positive in action and shall be of sufficient strength and number to prevent spreading or springing of the forms. They shall be of such type that they can be entirely removed or cut back 25mm or more below the finished surface of the concrete leaving no metal within 25mm of the concrete surface. The cavities shall be filled with grout and the surface left sound, smooth, even and uniform in colour.

Where reinforcement passes through the faces of a construction joint the stopping off board shall be drilled so, that the bars can pass through, or the board shall be made in sections with a half round indentation in the joint faces for each bar, so that when placed, the board is a neat and accurate fit and no grout leaks from the concrete through the bar holes or joints.

Where holes are to be provided in formwork for weep holes and the like, they shall be neatly trimmed off to fit the pipe and caulked with an approved material to form a waste-tight joint.

Formwork for columns and small concrete sections, or where directed by the Engineer, shall be fitted with trap doors through which saw dust, shaving and other debris can be removed.

All formwork for new lifts of concrete shall be tightly and accurately fitted against the concrete already cast to ensure that the surface of the new work will be quite flush and in line with that of the old one.

All surfaces of the formwork which come into contact with the wet concrete shall be treated with an approved non-staining mould oil or similar oil. Any material which will adhere to or discolour concrete shall not be used. The Contractor shall ensure that the oil will be kept from contact with the reinforcement or embedded fittings.

All forms shall be set and maintained true to the line designated until the concrete is sufficiently hardened. Forms shall remain in place for periods which shall be as specified in table 1724-1. When forms appear to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer shall order the work stopped until the defects have been corrected.

Formwork shall be provided for concrete surfaces at slopes of 30 degrees to the horizontal or steeper. Surfaces at slopes less than 20 degrees may be formed by screeding. Surfaces at slopes between 20 degrees and 30 degrees shall generally be formed unless the Contractor can demonstrate to the satisfaction of the Engineer that such slopes can be screeded with the use of special screed boards to hold the concrete in place during vibration.

Horizontal or inclined formwork to the upper surface of concrete shall be adequately secured against uplift due to pressure of fresh concrete. Formwork to voids within the body of concrete shall also be tied down or otherwise secured against floating.

All timber used for forms, false work and centering shall be sound wood, well-seasoned and free from loose knots, shakes, large cracks, warping and other defects. Before use on the work, it shall be properly stacked and protected from injury from any source. Any timber which becomes badly warped cracked, prior to the placing of concrete shall be rejected.

Where steel shuttering is to be used, it shall be of approved manufacture and panels shall fit tightly and accurately to form a true surface and joints, which will not allow the escape of liquid from the concrete. All rivets and bolt heads must be countersunk on the inside face and finished flush, so as to leave no mark on the resulting concrete surface. The provisions for timber shuttering specified above shall also apply to steel shuttering where applicable.

All formwork shall be approved by the Engineer before concrete is placed within it. The Contractor shall, if required by the Engineer, provide the later with copies of his calculations, of the strength and stability of the formwork or false work, but not withstanding the Engineer's approval of these calculations, nothing will relieve the Contractor of his responsibility for safety or adequacy of the formwork.

Formwork shall be measured by the square metre of formwork actually on contact with the finished face of the concrete. No deduction shall be made in the measurement for openings, pipes, ducts and the like, provided that the area of each is less than 0.05 square metres. Unless otherwise stated, if the volume or area of concrete has not been deducted when measuring the concrete in accordance with clause 320, formwork to form or box out the void shall not be measured. Formwork less than 300mm high to edges of slabs shall be measured by the linear metre.

Formwork required for blinding concrete, to form construction joints and hear keys for future concrete and other construction surfaces, shall not be measured and the costs shall be included in the rates for other work.

Formwork to contraction and expansion joints shall be measured by the square metre on one face only. The rates shall include for the costs stated below and for forming recesses for sealant and channels for grout

The rates for formwork shall include for the cost of submission of details, providing and transporting all materials for formwork and falsework, erection including provision of supports, fillets and chamfers 75mm and less in width, bolts, ties, fixings, cutting to waste, drilling or notching the formwork for reinforcement where required.

REMOVING OF FORMWORK

1. In the determination of the time for the removal of forms, falsework and husing, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete and the admixture used in the mix.
2. No formwork shall be removed without the prior approval of the Engineer and in no case shall shuttering of props be removed before the periods mentioned in table -1 have elapsed after placing the concrete. Compliance with these requirements shall not relieve the Contractor of his obligation to delay the removal of the forms, if the concrete has not set sufficiently hard.

MINIMUM PERIOD FOR FORMWORK REMOVAL

POSITION OF FORMWORK	MINIMUM PERIOD FOR TEM. OVER 10 DEG.C.	STRENGTH TO BE ATTAINED
Vertical or near vertical faces of mass concrete	24 hours	0.2C
Vertical or near vertical faces of reinforced walls, beams and columns	48 hours	0.3C
Underside of arches, beams and slab formwork only	4 days	0.5C
Supports to underside of arches, beams and slabs	21 days	0.75C
Arched linings in tunnels and underground works	24 hours	4N/mm ²

Note: C is the nominal strength for the class of concrete used.

When shuttering is removed after 3 days it will be necessary to ensure that the exposed surfaces of the concrete are kept thoroughly wetted for the period of curing specified in this section.

Forms shall be removed in such a manner as will not injure the concrete. The formwork shall be removed by gradual easing without jarring and only under competent supervision. Before removal of the shuttering, the concrete shall be examined and removal shall only be proceeded with, if the concrete has attained sufficient strength to sustain all the loads to which it will be subjected.

The Contractor shall be responsible for any injury or damage to the work caused by or arising out of the removal of formwork and props and any advice, permission or approval given by the Engineer relative to the removal of formwork and props shall not relieve the Contractor of this responsibility. Any work showing sign of damage through premature removal of shuttering or through premature loading shall be entirely reconstructed at the Contractor's expense.

Where props are to be left in position under slabs and beams, the formwork shall have been made in such a fashion, that it can be removed without disturbing the props in any way. Otherwise it must be left in position for the full period that the props are left in position.

False work supporting any span of a continuous or rigid frame structure shall not be released before the period specified for the concrete placed in that span. The same shall apply for the adjacent portions of each adjoining span over a distance of at least half the length of the span where false work is to be released.

The shuttering for a part of a structure supported by concrete placed subsequently to that in, or on the shuttering, shall not be removed until the supporting concrete has matured, and such shuttering shall be prominently marked with a warning against premature removal.

The structure shall not be assumed to be capable of carrying its full load until 28 days have elapsed from completing the placing of the concrete.

All false work materials shall be completely removed. False work piling shall be removed to

at least 0.5m below the surface of the original ground or original stream bed.

FINISHES ON FORMED SURFACES

Class F 1 finish

This finish is for surfaces against which backfill or further concrete will be placed. Formwork may be sawn boards, sheet metal or any other suitable material, which will prevent the loss of fine material from the concrete being placed.

Class F 2 finish

This finish is for surfaces which are permanently exposed to view, but where the highest standard of finish is not required. Forms to provide Class F2 finish shall be faced with wrought thickness tongued and grooved boards with square edges arranged in a uniform pattern and close jointed or with suitable sheet material.

The thickness of boards or sheets shall be such that there shall be no visible deflection under the pressure exerted by the concrete placed against them. Joints between boards or panels shall be horizontal and vertical, unless otherwise directed. This finish shall be such as to require no general filling of surface pitting, but fins, surface discoloration and other minor defects shall be remedied by methods agreed by the Engineer.

Class F 3 finish

This finish is for surfaces which will be in contact with water flowing at high velocity, and for surfaces prominently exposed to view where good appearance is of special importance. To achieve this finish, which shall be free of board marks, the formwork shall be faced with plywood, complying with BS 1088 or equivalent material in large sheets. The sheets shall be arranged in an approved uniform pattern. Whenever possible, joints between sheets shall be arranged to coincide with Engineerural features or changes in direction of the surface.

All parts of formwork concrete surface shall be in the positions shown on the drawings within the tolerances set out in table 1725-1. In cases where the drawings call for tolerances other than those given in the table the drawings shall rule.

TOLERANCES

	Tolerance in mm		
Class of finish	Sudden change in the surface	Gradual change of the surface measured by 3m straight edge	Concrete face displacement from correct position
F1	10	10 TO +25	+25 TO -10
F2	5	10	+ or -15
F3	2	5	+ or 10

Where precast have been set to a specified tolerance, further adjustments shall be made as necessary to produce a satisfactory straight or curved line. When the Engineer has approved the alignment, the Contractor shall fix the units so that there is no possibility of further movement.

REMEDIAL WORK TO DEFECTIVE SURFACES

If on stripping any formwork the concrete surface is found to be defective in any way the contract shall make no attempt to remedy such defects prior to the Engineer's inspection and thereceipt of any instructions which the Engineer may give. Defective surface shall not be made good by plastering.

Areas of honeycombing which the Engineer agrees may be repaired shall be cut back to sound concrete or to 75mm. whichever is the greater distance. In the case of reinforced concrete the area shall be cut bad to at least 25mm clear distance behind the reinforcement or to 75mm. whichever is the greater distance. The cavity shall have sides at right angles to the face of the concrete. After cleaning out with water and compressed air, a thin layer of cement grout shall be brushed on to the concrete surfaces in the cavity and it shall then be filled immediately with concrete of the same class as the main body but with aggregate larger than 20mm nominal size removed. A form shall be used against the cavity provided with a lip to enable concrete to be placed. The form shall be filled to a point above the top edge of the cavity. After seven days the lip shall be broken off and the surface ground smooth.

Surface irregularities which are outside the limits of tolerance set out in table 1725-1 shall be grounddown in the manner and to the extent instructed by the Engineer.

Defects other than those mentioned above shall be dealt with as instructed by the Engineer.

REINFORCEMENT FOR CONCRETE

Reinforcement which shall comply with the following Kenya Standards, covers and deformed bar reinforcement and steel fabric to be cast into concrete in any part of the Works but does not include pre-stressing tendons or any other embedded steel.

- KS 02 -22 for hot rolled plain bar
- KS 02 -105 for hard drawn mild steel wire
- KS 02 -573 for cold worked steel bar
- KS 02 -574 for steel mesh fabric

All reinforcement shall be from an approved manufacturer and, if required by the Engineer, the Contractor shall submit a test certificate from the manufacturer.

All reinforced for use in the works shall be tested for compliance with the Appropriate Kenya Standard in a laboratory acceptable to the Engineer and two Copies of each test certificate shall be supplied to the Engineer. The frequency of Testing shall be as set out in the Kenya Standard.

BENDING AND FIXING REINFORCEMENT

Unless otherwise shown on the drawings, bending and cutting shall comply with BS 4466. The Contractor shall satisfy himself as to the accuracy of any bar bending schedules supplied and shall be responsible for curving, bending and fixing the reinforcement in accordance with the drawings.

Bars shall be bent cold by the application of slow steady pressure. At temperatures below 15 degrees centigrade the rate of bending shall be reduced, if necessary to prevent fracture of the steel.

After bending, bars shall be securely tied together in bundles or groups and legibly labelled as set out in BS 4466.

Reinforcement shall be thoroughly cleaned and all dirt, scale, loose rust, oil and other contaminants removed before it is placed in the works.

Reinforcement shall be securely fixed in position within a dimensional tolerance of 20mm. In any direction parallel to a concrete face and within a tolerance of 5mm at right angles to a face, provided that the cover is not thereby decreased below the minimum shown on the drawings, or if not shown, shall be not less than 25mm or the diameter of the bar, whichever is the greater. Cover on distribution steel shall not be less than 15mm or the diameter of the bar, whichever is the greater.

Unless otherwise agreed by the Engineer, all intersecting bars shall either be tied together with 1.6mm diameter soft annealed iron wire and the ends of the wire turned into the body of the concrete, or shall be secured with a wire clip of a type agreed by the Engineer.

Spacer blocks shall be used for ensuring that the correct cover is maintained on the reinforcement. Blocks shall be as small as practicable and of a shape agreed by the Engineer. They shall be made of mortar mixed in the proportions of one part of cement to two parts of sand. Wires cast into the block for tying in to the reinforcement shall be 1.6mm diameter soft annealed iron.

Alternatively another type of spacer block may be used subject to the Engineer's agreement.

Reinforcement shall be rigidly fixed so that no movement can occur during concrete placing. Any fixings made to the formwork shall not be within the space to be occupied by the concrete being currently placed.

No splices shall be made in the reinforcement except where shown on the drawings or agreed by the Engineer. Splice lengths shall be as shown on the drawings.

Reinforcement shall not be welded except where required by the contract or agreed by the Engineer. If welding is employed, the procedures shall be as set out in BS 2640 for gas welding or BS 5135 for metal arc welding. Full strength butt welds shall only be used for steel complying with BS 4449, and if used on high yield deformed bars complying with BS 4449 the permissible stresses in the vicinity of the weld shall be reduced to those applicable to the plain bars complying with that specification.

Bars complying with BS 4461 or other high tensile bars shall not be bent after being placed in the works.

Before concrete is placed in any section of the works, which includes reinforcement, the reinforcement shall be completely clean and free from all contamination, including concrete, which may have been deposited on it from previous operations.

The Contractor shall ensure that reinforcement left exposed in the works shall not suffer distortion, displacement or other damage. When it is necessary to bend protruding reinforcement aside temporarily, the radius of the bend shall not be less than four times the bar diameter for mild steel bars of six times the bar diameter for high yield bars. Such bends shall be carefully straightened before placing concrete continues without leaving residual kinks or damaging the concrete round them. In no circumstances will heating and bending of high yield bars be permitted.

Reinforcement shall be measured in kilogrammes for each of the following ranges of diameters:

(a) of diameter equal to or less than 16mm

(b) Of diameter greater than 16mm

Steel fabric reinforcement shall be measured by the square metre and shall be the calculated area excluding for laps.

Steel plain and deformed bar reinforcement shall be measured by the Kg and shall be the calculated weight of the steel required splice lengths shown on the drawings. No allowance shall be made in the measurement for rolling margin or cutting waste. The density of steel shall be taken as 7850 kilogrammes per cubic metre.

The rates for reinforcement shall include for the cost of providing, cutting to length, splice lengths additional to those shown on the drawings, laps, bending, hooking, waste incurred by cutting, cleaning, spacer, blocks, provision and fixing of chairs or other types of supports, welding, fixing the reinforcement in position including the provision of wire or other materials for supporting and tying the reinforcement in place, bending reinforcement aside temporarily and straightening, placing and compacting concrete around reinforcement and for complying with the requirements of this clause.

MEASUREMENT AND PAYMENT FOR CONCRETE

Concrete shall be measured by the cubic metre of each class calculated from the dimensions given on the drawings or as instructed by the Engineer. No deduction shall be made in the

measurement for:

- a) Bolt holes, pockets, box outs and cast in components provided that the volume of each is less than 0.10m^3
 - b) Fillets, drips, rebates, recesses, grooves, chamfers and the like each less than 0.005 m^2 in cross-sectional area.
1. The rate for concrete shall include for the cost of:
- a) Provision and transport of cement aggregates and water
 - b) Admixtures and workability agents including submission of details unless Specified.
 - c) Batching, mixing, transporting, placing, compacting and curing
 - d) Laying to sloping surfaces not exceeding 15 degrees from the horizontal and to falls.
 - e) Formwork to binding concrete
 - f) Placing and compacting against excavated surfaces, where required, including any additional concrete to fill overbreak or working space.
 - g) Complying with the requirements of this specification.

Blinding concrete shall be measured by the square metre calculated as the product to the width of the foundation as shown on the drawings and the length of the foundation. No deduction shall be made for openings, provided that the area of each is less than 0.05m^2 .

SECTION IX (3)

MATERIALS SPECIFICATIONS (STEEL)

STRUCTURAL STEEL WORK

STRUCTURAL STEEL GENERAL

Approvals

Before construction commences the Contractor shall supply to the Engineer for his approval such details as he may require of the welding plant jigs, workshop facilities and construction, devices e.g. cranes scaffolding etc. which the Contractor proposes using for the fabrication and erection of the steelworks. The information shall be in sufficient detail to enable the Engineer to approve or otherwise.

Authoritative Standards and Codes of Practice

The following authoritative Standards are referred to hereinafter:-

British Standard Specifications as published by the British Standards Institution London (abbreviated in the text to BS).

<u>BS</u>	<u>Date</u>	<u>Title</u>
4: pt 1 rolled sections.	1972	Structural steel sections hot
4: pt 2	1969	Hot-rolled hollow sections.
18	1970-1	Methods for tensile testing
		Metals.
153	1972	Steel Girder Bridges.
449. Pt.2	1969	The use of structural steel in
		Building.
Addendum No. 1 sections in building.		The use of cold formed steel
499: Pts. 1 & 2	1965	Welding terms and symbols
638	1966	Arc welding plant equipment and
accessories.		

639	1969	Covered electrodes for the manual metal
arc welding of mild steel		
and medium-tensile steel.		

1719	1969	Classification, coding and marking
covered electrode for metal arc		
of welding		

<u>BS</u>	<u>Date</u>	<u>Title</u>
2521 & 2523	1966	Lead based priming paints.
3692	1967	ISO metric precision hexagon bolts
screws and nuts.		
3698	1964	Calcium plumbate priming paints.
4190	1967	ISO metric black hexagon bolts
4320	1968	Metal washers for general
engineering purpose.		
4360	1972	Weldable structural steels.
4395: PtI	1969	High strength friction grip bolts
4652: PtI	1970	The use of high strength friction grip bolts in structural steelworks. and associated nuts and washers for structural engineering.
4652	1971	Metallic zinc rich priming paint (organic media).
4870	1974	Approval testing of welding procedures.
4871: PtI	1974	Approval testing of welders working to approved welding procedures
4872: PtI	1972	Approval testing of welders when not required procedure approval is
5135	1974	Metal-arc welding of carbon and carbon manganese steels.

Swedish Standards published by the Swedish Standard Commission, Stockholm (abbreviated in the text to SIS).

<u>SIS</u>	<u>Date</u>	<u>Title</u>
055900	1962	Rust Grades for steel surfaces and preparation grades prior to protective coating.

British Standard Codes of practice published by the British Standards Institution, London (abbreviated in the text to CP).

<u>CP</u>	<u>Date</u>	<u>Title</u>
Chapter 3V.Pt.2	1972	Wind Loads.
2008	1966	Protection of iron and steel structures from corrosion.

Should the Contractor wish to substitute any other standard or code of practice either in its entirety or in part, for any of those listed above he should submit details of such together with two complete copies to the Engineer for his approval. Generally approval will only be given where the Engineer considers the proposals to give at least an equivalent standard of finished work.

Materials and workmanship for all structural steelworks shall be in accordance with BS for building and general work and shall be in accordance with BS 153 for bridge works except where superseded by this specification.

STRUCTURAL STEEL MATERIALS

Mild steel for Hot Rolled Sections

Mild steel for hot rolled sections shall be to grade 43C of BS 4360 unless otherwise stated.

The finished dimensions, forms weights and tolerances of all sections shall comply with BS 4P, 1 or Pt2 as appropriate for sections or hollow sections.

The Contractor shall obtain a manufacturer's certificate of test in accordance with the appropriate standard for each steel batch relating to steel to be used in the works.

Notwithstanding the manufacturer's certificate the Engineer may require that steel to be used in the works be sampled and tested in accordance with BS 18. Any batch of steel so tested which fails to comply with specification will be rejected.

All steel for use in the works shall be stored whether on the site or fabrication works in clean conditions, in clearly identified batches and protected from damage and heavy rusting.

Mild Steel for Cold Formed Sections:-

Mild steel for cold formed sections shall be to grade 43A of BS 4360 unless otherwise stated.

The Contractor shall obtain a manufacturer's certificate of test in accordance with the appropriate standard for each batch of steel to be used in the works.

Notwithstanding the manufacturer's certificate the Engineer may require that any steel to be used in the works be sampled and tested in accordance with BS 18. Any batch of steel so tested which fails to comply with this specification will be rejected.

All steel for use in the works shall be stored whether on the site or in fabrication works in clean conditions and in clearly identified batches protected from damage and heavy rusting.

High Yield Steel

High yield ribbed steel shall be to grade 50 C of BS 4449-2005 unless otherwise stated.

The Contractor shall obtain a manufacturer's certificate of test in accordance with the appropriate standard for each steel batch relating to steel to be used in the works.

Notwithstanding the manufacturer's certificate the Engineer may require that any steel to be used in the works be sampled and tested in accordance with BS 18. Any batch of steel so tested which fails to comply with this specification will be rejected.

All steel for use in the works shall be stored whether on the site or in clean conditions, and in clearly identified batches protected from damage and heavy rusting.

Black Bolts, Nuts and Washers

Black bolts shall be to grade 4.6 of BS 4190 unless otherwise stated.

Nuts shall be in accordance with BS 4190 unless otherwise stated.

Washers shall be normal black metal washers to BS 4320 unless otherwise stated.

Where necessary washers shall be tapered D-shaped washers of steel or malleable cast iron.

Precision Bolts, Nut and Washers

Precision bolts and nuts shall comply with BS 3692.

Washers shall be black metal washers to BS 4320 unless otherwise stated.

High Strength Friction Grip Bolts

High strength friction grip bolts and associated nuts and washers shall comply with BS 4395.

Welding Electrodes

Welding electrodes shall be grade A to BS 639 of the best heavy coated type.

Electrodes shall be of a type appropriate to the grade of steel being welded.

The contractor shall obtain the manufacturer's certificate to show that each consignment complies with the specifications.

Electrodes shall be kept in unbroken packets in a dry store to which the Engineer shall have reasonable access at all times to inspect and to reject electrodes that he considers unsuitable.

Electrode classification shall be BS 1719.

Priming Paints

Priming paints shall be one of the following types as further specified.

Red lead primer types B or C to BS 2523 Calcium plumbate primer to BS 3698 Metallic Zinc - rich primer to BS 4652.

FABRICATION WORKS

Fabrication Tolerances

The Sub-contractor shall fabricate all steelworks to give a finished product that is true to size and out of winding. Particular care shall be taken when welding to avoid distortion of hollow steel sections plates and angles.

Where repetition or interchangeability of units is required the fabrication shall be carried out so that the critical dimensions of the unit when measured by a tape calibrated at 20 degrees comply with the tolerance given in table 51.1.

The use of jigs is required for repetitive interchangeability or complicated work.

Surface Preparation

All steelworks shall be prepared to the satisfaction of the Engineer by one of the following methods as further specified.

Where blast cleaning of steel is specified it shall be carried out in accordance with BS 4232 to remove dirt mill scale and rust to quality of surface finish BS 21/2 SIS 055900. The maximum grade of abrasives shall not be used unless the operative is totally protected and is using breathing apparatus. The minimum amplitude (peak to trough) of the blast cleaned surface shall not exceed 0.1.

A sample blast cleaned steel panel measuring not less than 150 x 150 x 6mm and adequately protected by sealed clean polythene wrapping shall be submitted to the Engineer for approval before any work is put in hand.

All blast cleaned surfaces shall be protected as soon as possible but later than 4 hours after having been blast cleaned.

Where pickling of steel is specified it shall be carried out by the footer process as defined to clause 102 of CP 2008. The first priming coat of paint shall be applied as soon as the steel has dried and is still warm.

Where mechanical cleaning of steel is specified it shall be carried out by power driven tools such as carborundum grinding discs, chipping hammers or needle guns followed by steel wire brushing and dusting to remove all loosened parts.

All mechanically cleaned steel shall be protected within 4 hours of having been cleaned.

All oil, grease and paint on bare metal shall be removed by a suitable solvent.

Any steel which is appreciably rusted or pitted before cleaning will be rejected.

Fabrication Tolerance

Fabrication Tolerances for repetitive or interchangeable units Table 51.1

Dimension measured Tolerance for Tolerance on overall dimensions of single element assemble
d system of more than one element.

Not exceeding 2,500m	+/- 1.5 mm	+/- 1.5 mm	Exceeding
2,500m but not more than 5,000m.	+/- 3.0 mm	+/- 3.0 mm	Exceeding
5,000 but not exceeding 10,000m.	+/-5.0 mm	+/-6.0mm	Exceeding
10,000m but not exceeding 15,000m. 15.00m.	+/- 5.0 mm	+/-10.0 mm	Exceeding

Prefabrication Priming

Where fabrication of steelworks is to be carried out after surface preparation the protection required shall be approved by means of an approved prefabrication primer which will not give noxious fumes whilst welding is in progress.

Cutting, Drilling, Punching and Forming

All steelworks shall be cold sawn or machine gas cut and no manual gas cutting shall be used without approval.

Where machine gas cutting is used or manual gas cutting permitted, the heat affected metal shall be ground off.

All projecting corners of cleats, plates, etc., shall be neatly splayed and all burrs and rough edges shall be removed.

All holes shall be drilled and no punching will be permitted.

Where slotted holes are required they shall be formed by first drilling and then reaming out smooth to the size required.

All members, plates, brackets, etc. shall be neatly and accurately sheared, sawn or profiled to the required shapes as shown on the drawings.

Where steel is oxy-cut to shape, care shall be taken to preserve the finished sizes required if members or plates are bent or set, the bends or sets shall be correctly made to the radii or angles specified without leaving hammer marks. The material may be heated to permit this material that has been heated shall be annealed to approval.

Holes for black bolts shall be drilled or punched 2 mm larger in diameter than the bolt used. Holes for high tensile friction grip bolts shall be drilled or sub-punched are reamed to 2 mm larger in diameter than the specified bolts sizes. All drilled holes shall be parallel sized and

shall be drilled with axis of the holes perpendicular to the surface. Badly drilled holes shall either be reamed out to approval and larger bolts fitted or otherwise as directed. All rough edges shall be ground off when holes are drilled in one operation through two or more thicknesses of material, the parts shall be separated after drilling and all burrs removed before assembly. Holes for bolts shall not be formed by a gas cutting process.

Welding

Welding shall be carried out in strict accordance with BS 5135 and electrodes shall comply with BS639.

Welding plant, equipment and accessories shall comply with the requirements of BS 638.

Fusion faces shall be free from irregularities such as tears, fins, etc. which would interfere with the deposition of weld metal.

Fusion faces shall be smooth and uniform and shall be free from loose scales, slag, rust, grease, paint and /or other deleterious material.

All welds shall be of acceptable types, shall be of the finished sizes specified and shall be carried out in such sequence that minimum distortion of the parts welded results.

Preparation of edges for welding shall be carried out by planing or machine flame cutting. Manual flame cutting may be permitted in certain circumstances. Parts to be welded shall be maintained in their correct relative positions during welding, preferably by jigs. Multiple run welds shall be carried out with each run closely following the previous run but allowing sufficient time for the proper removal of slags.

The Contractor shall ensure that each run is inspected and any unsatisfactory weld cut out and remade to approval.

Welds in material 25mm or greater in thickness shall be made by the Argon arc or similar approved process, and special precautions shall be taken to prevent weld cracking.

Unless otherwise shown, the minimum size of fillets shall be 6mm.

On completion, welds shall present a smooth and regular finish. Weld metal should be solid throughout with complete fusion between weld metal and parent metal and between successive runs throughout the joint. Defects shall be cut and made good to approval in sound weld metal.

The external faces of butt weld are to be ground smooth on completion and to be to the approval of the Engineer.

Individual transformers or motor generators shall be fitted with current density control and shall be situated as close as possible to the welder that he may have at hand the means to adjust the current.

In order to show that current values are within the ranges specified by the manufacturer of the electrodes the transformers or motor generators shall be calibrated regularly by means of an ammeter.

Electrodes shall not be used in a damp condition and where necessary they shall be kept in heated quivers while in use.

Location or tack welds shall be of the same quality and size as the first run of the main weld which when completed shall fuse completely with the ends of the location weld and for a reasonably regular finished profile.

Before welding commences the Sub-Contractor shall satisfy the Engineer that all his proposed welders are able to deposit the appropriate weld type to the required standard. The qualifying tests will be to BS4872 unless special welding procedures to BS 4870 are required when welder testing will be to BS 4871.

Notwithstanding any approval of welders or procedures the Engineer may require that complete welds are tested by gamma or X-ray radiography or ultrasonic methods. Any weld so tested and found to have slag inclusions or other unacceptable defects shall be cut out and the weld remade at the Contractor's expenses.

BOLTING

Bolted Connections

All bolts, nuts and washers shall be free from rust and dipped in linseed oil immediately before connection.

When tightened at least one complete thread of the bolt shall be visible above the nut.

Where nut or bolt head would bear on an inclined surface a beveled washer of the correct shape shall be interposed between the two surfaces.

All bolted connections shall be made with the appropriate washers under the bolt head and nut.

Where the surfaces under the nut or bolt head are not perpendicular to the axis of the bolt tapered washers shall be used.

Undue force and drift pins shall not be used to align the holes for bolting and holes shall not be enlarged without prior approval.

High strength friction grip bolts shall be used in compliance with BS 4604.

All black bolts, nut and washers shall comply with the requirements of BS 916 or alternatively BS 4190, ISO metric black hexagonal bolts, screws and nuts. All high tensile steel bolts, nuts and washers used in joints shall comply with the requirements of BS 3139 and shall be used in accordance with BS 3294.

Steel Bracings

Bracings shall be carefully set out to the dimensions shown on the drawings.

The bracing plate connecting plates shall be carefully set out to the dimensions shown on the drawings.

Notwithstanding any dimensioned spacing, the Contractor shall ensure that the spacing is satisfactory for the available stock lengths. However, the Engineer's approval must first be obtained before any alteration is made in spacing.

TRANSPORTATION, HANDLING AND ERECTION

Shop Assembly

Such assembly of units in the shop as is specified or necessary before transporting to the site will be inspected by the Engineer before painting. The work will be laid out in the shop or yard so that all parts are accessible for inspection and testing of the work.

The Contractor shall furnish all facilities for inspection and testing of the work and he must notify the Engineer on each occasion when the material is ready for inspection.

Marking

All members of the structure to be site assembled shall be match marked in accordance with the shop details and marking plan submitted for approval.

Painting of Fabrication Works

After fabrication of the steel work all surfaces not previously protected shall be painted with the specified primer except for surfaces to be encased in concrete or within 75mm of the interfaces of high strength friction grip bolted connections, which shall not be painted.

The Contractor shall ensure that all voids are fully sealed before painting so that no possibility exists for moisture to reach surfaces that cannot be painted.

All weld surfaces shall be thoroughly deslagged before painting.

Cast-in-Items

Grouting up of holding down bolts shall be carried out after the Engineer has approved the line and level of all the steelworks.

Transport and Erection

The Contractor shall make whatever arrangements which are necessary for the transport of the steelworks from the fabrication yard to the site. All steelworks shall be carefully loaded stacked and unloaded to avoid damage of any description. Any damaged items shall be replaced unless the Engineer permits the rectification of the damage. Such replacement or rectification shall be at the Contractor's expenses.

No erection shall commence before accurate Site Dimensions have been taken by the contractor, and no claim will be considered should final dimensions differ from those on the drawings.

Any modifications to the structural steel required in order to comply with the Site Dimensions shall be made on the ground to the Engineer's approval before erection is commenced.

All erection shall be carried out by competent and experienced workmen and the Contractor shall take every care to safeguard the public, workmen and adjoining properties.

All gear used shall be of adequate strength and shall comply with all Regulations current at the time.

The Contractor shall be held responsible for all damage caused to the structure, workmen and adjoining property during erection.

Steel shall be stored and handled and erected in such a manner that no member is subjected to excessive stresses which could have an adverse effect on the properties of the steel. If in the opinion of the Engineer, the steelworks has been subjected to such treatment, the Contractor shall remove this steel from the site and replace it at his own expense.

No member or part of a member which has been bent or distorted shall be erected in that condition.

All straightening shall be done on the ground.

Rafters and open web joists shall be carefully handled, at all times when being erected and shall be lifted at such points and in such a manner as will preclude any possibility of damage from erection stresses.

Immediately after erection, each rafter shall be made secure by purlins, bracing, or guys to approval. Bracings shall be placed in position as soon as dependent works will permit.

Before erection commences the Contractor shall allow the Engineer the opportunity to comment on his erection procedures.

The Contractor shall be responsible for checking all the work prepared by others that may be incorporated into his work or the dimensions of any structure affecting his erection. If as a result of this check the Contractor shall find any discrepancies or shortfalls he shall report the situation to the Engineer immediately.

All setting out shall be carried out with steel tapes and bands calibrated at 20 degrees C and used at the correct tension.

All steelworks shall be leveled to a datum point and aligned to a base before erection. Both datum point and setting out lines shall be agreed before commencement.

All steelworks shall be accurately and securely located to the correct profile and camber, if any, before assembly.

The completed steelworks shall be dimensionally accurate to within the following tolerances:-

Between the centre line

Principal members: +/- 6 mm up to 10 metres c/c.

Over 10 metres c/: The +/- 10 mm tolerances shall not be accumulative.

(i) In bow of any member: +/- 10mm in any 5.0m, unless specifically precambered

or radiused

(ii) In twist of any member: +/- 10 mm in any 1.0m.

After transit and erection all damaged paintwork or coating shall be repaired to the Engineer's satisfaction.

All bolts, nuts and washers shall be painted or protected after erection and final tightening up with two coats of the same primer or protective coating as the remainder of the steelworks.

Rolled Sections - Shop and Field Connections

All shop connections shall be electric welded or bolted with high tensile friction grip bolts.

No bolts used shall be less than 12mm diameter and no weld less than 40 mm in length. At least two bolts shall be used in connections transmitting loads unless otherwise indicated by the Engineer.

No weld of length less than four times the nominal fillet size shall be deemed capable of carrying a load.

Beam to column connections not detailed shall on "standard" top and bottom cleat connections with the load carried on the bottom cleat. "Standard" web connections shall be used for connecting beams to beams.

Field connections shall be as detailed i.e. bolted with high tensile or black bolts in drilled holes. Black bolts in punched holes will only be permitted for connections carrying a designed load or for connections to timber members.

Structural Hollow Sections - Circular and Rectangular Shop and Field Connections

Hollow sections shall be connected by electric welding unshown otherwise.

The design of welds shall be in accordance with Clauses 53 and 54 and Appendix C of BS449.

Butt welds shall be made with fusion surfaces of the ends of each member properly prepared and members properly aligned.

In making connections, drifting of unfair holes will not be permitted and holes not matching properly shall either be reamed or drilled out and a larger bolt inserted or otherwise as directed.

Holes formed or enlarged by oxy-cutting will be condemned and must be filled to approval by electric welding and re-drilled.

Tightening and Tensing of High Tensile Friction Grip Bolts

Before assembly, the contact surfaces, including those adjacent to the washers shall be descaled or carry the normal tight mill scale. They shall be free from dirt, oil, loose scale, burrs

(except priming paint) pits and other defects that would prevent solid seating on the parts.

Bolts shall be assembled with approved hardened flat or tapered washers as required between the bolt head and nut and the softer mild steel.

When bearing faces of the bolted parts have a slope of more than 1 in 20 with respect to a plane normal to the bolt axis, square smooth beveled washers shall be used to compensate for lack of parallelism.

All bolts shall be tightened by the "Turn of NUT" method. This method shall generally be as approved by the Engineer to achieve in all bolts a minimum tension equal to the proof load.

Protective Scheme to BS 5493

For this contract the protective requirements for all the steelworks shall be as follows:-Metal coating - Nil

Primer - One coat of prefabrication primer

One coat of red lead types B or C to BS 2523.

Protective Coats - After erection one further coat of red lead.

Finishing Paint - Total finished paint film thickness not less than 100 micron or gloss 08 C25.

Working and Fabrication Drawings

The Contractor shall prepare working and fabrication drawings which are complete in such detail as may be necessary to enable the works to be fabricated and subsequently erected on site and to enable the Engineer to approve the Contractor's proposals and details for the execution of the works.

Drawings shall be prepared on standard A1 size sheets correctly tilted, referenced and with the Contractor's name. Alternative size sheets may only be used with approval of the Engineer.

Welding shall be shown on drawings using welding symbols to BS 499.

All working and fabrication drawings must be submitted to the Engineer for approval and if not so submitted to the Contractor shall bear the cost of any rejected work that he has commenced or prepared. It is recommended in view of the following clause, that the Contractor allow at least three weeks plus delivery time and preferably eight weeks for submission before commencement of works.

The Engineer requires three copies of all working and fabrication drawings and calculations to be submitted for approval. Usually one copy of these drawings will be returned to the Contractor within three weeks of receipt marked either:-

(iii) Examined and Returned for Correction
Signature.....Date.....
.....

For
Manager Engineering Services - Structural
National Environment Management Authority . P.O.BOX: 67839-00200, Nairobi.

Or
(iv) Approved with Corrections indicated
Signature.....Date.....

.....

Manager Engineering Services - Structural
National Environment Management Authority (NEMA) P.O.BOX: 67839-00200, Nairobi.

and

Approval of Contractor's drawings or documents shall not relieve the Contractor of any of his obligations under the Contract.

Should the Engineer fail to approve or otherwise inform the Contractor within the three weeks from the time he receives the drawings the Contractor may assume that the drawings have the Engineer's approval.

Such approved fabrication shall not be departed from without the approval of the Engineer.

Approval by the Engineer of working and fabrication drawings shall not relieve the Contractor of any of his obligations under the Contract nor relieve him of any responsibility for any subsequent errors found in the working and fabrication drawings or in other work on site or elsewhere.

Record Drawings

On completion of the erection the Contractor shall revise or redraw his fabrication drawings to show any agreed modifications made during the course of the Contract and shall submit one copy negative or velograph of each drawing to the Engineer for record purposes. Each drawing shall be of standard A1 size and revision marked.

PAINT WORKS

Authoritative Standards and Codes of practice

The following authoritative Standards are referred to hereinafter:-

British Standard Specifications as published by the British Standards Institution London (abbreviated in the text to BS).

BS	DATE	TITLE
282.389	1963	Lead chromes and zinc chromes for paints
388	1972	Aluminium pigments
729	1971 steel articles.	Hot dip galvanized coatings on iron and
2521&2523	1966	Lead based priming paint.
2569 Pt 1	1964	Protection of iron and steel by aluminum and zinc against atmospheric corrosion.
3698	1964	Calcium plumbate for paints.
3761	1970	Non-flammable solvent based paint remove
3981	1966	Iron oxide pigment for paints

Should the Contractor wish to substitute any other standard either in its entirety or in part for any of those listed above he should submit details of such together with two complete copies of the Engineer for his approval. Generally approval will only be given when the Engineer considers the proposal to give at least an equivalent standard of finished work.

Metal Coatings

Hot dip galvanized coatings shall comply with the requirements of BS 729 part 1. Sheradised coatings shall comply with the requirements of BS 729 part 2.

Sprayed metal coatings shall comply with the requirements of BS 2569 Part 1.

Priming Paints

Lead base priming paints shall comply with the requirements of BS 2523. Calcium plumbate priming paints shall comply with the requirements of BS 3698.

Undercoating and Finishing Paints

Ready mixed oil based undercoating and finishing paints shall comply with the requirements of BS 2525

- 32.

Red Oxides of Iron

Natural red oxides of iron and manufactured red oxides of iron for paints excluding venetian red shall comply with the requirements of BS 3981.

Lead Chromes and Zinc Chromes

Lead chromes and zinc chromes for paints shall comply with the requirements of BS 282 and BS 389.

Aluminium Flake Pigments

Aluminium flake pigments (powder and paste) for paints shall comply with the requirements of BS 388.

Calcium Plumbate

Calcium plumbate for paints shall comply with the requirements of BS 3699.

Paint Removers

Water rinsable and solvent rinsable paint removers shall comply with the requirements of BS 3761.

Storage of Paint

Paint shall be stored in sealed containers in a lock-up store where it is not exposed to extreme temperatures. The temperature of the store shall be kept between 4 degrees C. Any special storage conditions recommended by the manufacturer shall be strictly adhered to.

Paint which has not been used within the shelf life period specified on the containers or within 12 months of the date of manufacture whichever is the lesser shall be discarded and replaced.

Paint from painter's kettles shall be returned to store at the end of each working period where it shall be kept in a sealed container. Before it is re-issued for use it shall be thoroughly mixed and no fresh paint or thinners shall be added.

Application of Paint

All paints shall be supplied from the store to the painters ready for application and the addition of thinners or of any other material shall be thereafter prohibited. Any instructions given by the paint manufacturer shall be strictly followed.

All painting shall be carried out by skilled painters under competent supervision.

Paint shall be applied to dry surfaces which have been prepared and cleaned as specified. The interval between the preparations of metal surfaces and the application of the first priming coat of paint shall be in accordance with the relevant requirements of the structural steelworks specification.

Paint shall not be applied under the following conditions:-When the ambient temperature falls below 4 degrees C or the relative humidity rises above 90 per cent.

- (a) During rain fog or mist.
- (b) When condensation has occurred or is likely to occur on the steel.

Two pack paints of the peroxide resin type shall not be applied when the temperature is below 5 degrees C or as required by the paint manufacturer nor shall it be applied when the temperature is likely to fall below the specified minimum during the curing period.

Unless otherwise agreed by the Engineer each coat of paint shall be applied by an approved method to produce a continuous film of paint of uniform and even thickness.

As soon as the first priming coat has dried an extra strip of paint shall be applied by brush to edges, corners, crevices, bolt heads and welds of steelworks using paint of contrasting shade. Successive coats shall have different shades for identification and each coat shall be thoroughly dry before the application of a further coat.

The total dry paint film thickness of the paint system for steelworks or bare steel surfaces and on metal coated surfaces shall be not less than 0.125mm or such greater thickness as may be further specified.

When required by the Engineer the dry paint film thickness shall be measured by Elcometer or other instruments approved by the Engineer.

In order to obtain the dry film thickness specified the Contractor shall ensure that the coverage rate given by the paint manufacture will enable this thickness to be attained.

Wet film thickness gauges may be used for checking but shall not be permitted as a means of predicting dry film thickness.

No paint shall be used after the expiration of the pot life stipulated by the manufacturer and paints of limited pot life shall not be mixed with fresh paint or have thinners added to them.

SECTION VII- BILLS OF QUANTITIES

Bill No.1 - Preliminaries and General Items					
Item	Description	Unit	Qty	Rate (Kshs.)	Amount (Kshs)
1.1	Project Preliminaries				
1.1.1	Insurance against personal injury	Item	Lump Sum		
1.1.2	Provision of Contractor's Camp and Office	Item	Lump Sum		
1.1.3	Erection and maintenance of Project Signboard throughout the contact period	No.	2		0
1.1.4	Allow for allowances to the Resident Engineer and Project Implementation Team throughout the contract period	Month	5	160,000	800,000
1.1.5	Allow for contractor's overhead on item 1.1.4 above	Item	%		0
1.2	Testing of Works and Materials				0
1.2.1	provide Ksh.50,000 for testing of works as requested or as directed by the Engineer	Item	Lump Sum		50,000
1.2.2	Allow for a percentage adjustment on item 1.2.1 for profit and overheads	Item	%		0
	Total carried over to summary				850,000
Bill No.2 Intake Works					
Item	Description	Unit	Qty	Rate (Ksh)	Amount (Ksh)
2.1	Site Clearance and Setting Out				
2.1.1	Clear site of all trees of girth less than 500mm diameter including grubbing of stumps, roots, shrubs and bushes, with respect to intake weir and wing walls and dispose as specified by the supervisor (provisional)	M ²	16		

2.2	River Diversion/Access to Intake Site				
2.2.1	Provide for river diversion works and/or coffer dam and keeping excavation area free from general waters. Price to include for all labor, materials and superintendence during the construction period, and reinstatement upon completion of the works	Item	Lump Sum		
2.3	Demolition of Existing Intake Works				
2.3.1	Demolish existing broken/damaged reinforced concrete weir and dispose as directed by the supervisor	Item	Lump Sum		
2.4	Excavation/Earthworks/Cutting				
	To include for all trimming to levels, backfilling with approved selected spoil, compacting, disposal of surplus material and reinstatement				
2.4.1	Excavate in normal soil n.e 1.0m depth for wing walls	M ³	16		
2.4.2	Extra over item 2.4.1 for excavation in soft rock n.e. 2.3m depth (Provisional)	M ³	17		
2.4.3	Excavation in rock n.e 1.0m depth for intake weir	M ³	15		
2.4.4	Extra over item 2.4.3 for blasting (Provisional)	M ³	8		
2.4.5	Excavate in rock n.e. 0.3m depth in river bed and level to receive concrete aprons in item 2.7.3	M ³	12		
2.4.6	Excavate and trim river banks to receive gabion boxes in item 2.8.1 as directed by the supervisor	M ³	270		
2.5	Form Work				
2.5.1	Supply materials and provide fair finish formwork to intake weir. Allow for propping and strutting.	M ²	91		
2.5.2	Supply materials and provide fair finish formwork to wing walls. Allow for propping and strutting.	M ²	15		
2.6	Reinforcement				

2.6.1	Supply, transport, cut, bend and fix D12 bars 250mm center to center both ways in intake weir with hooks of minimum 150mm and laps of minimum 300mm. Provide minimum of 40 mm concrete cover. Allow for tying and binding.	M	1237		
2.6.2	Supply, transport, cut, bend and fix D12 bars 250mm center to center both ways in wing walls with hooks of minimum 150mm and anchored not less than 600mm into intake weir reinforcement. Provide minimum of 40 mm concrete cover. Allow for tying and binding.	M	517		
2.6.3	Supply, transport, cut, bend and fix D12 bars 250mm center to center both ways in upstream and downstream aprons with hooks of minimum 150mm and anchored not less than 600mm into intake weir reinforcement. Provide minimum of 40 mm concrete cover. Allow for tying and binding.	M	523		
2.7	Concrete Works				
2.7.1	Supply materials, mix, place, vibrate and compact concrete class 20/20 in rifts n.e 1.5m high for intake weir	M ³	109		
2.7.2	Supply materials, mix, place, vibrate and compact concrete class 20/20 in rifts n.e 1.5m high in wing walls	M ³	11		
2.7.3	Supply materials, mix, place, vibrate and compact concrete class 20/20 in upstream and downstream aprons	M ³	12		
2.8	River Bank Protection				
2.8.1	Supply and fix 2m high stack with 0.5m offset of 2m x 1m x 1m with mesh hole 75mm by 75mm of wire diameter 3mm/10swg galvanized high tensile steel gabions boxes in trench along river bank	No	90		

2.8.2	Supply and closely pack in gabion boxes weathering resistant hard-core of approved quality ranging between 150mm and 200mm.	Ton	288		
2.9	Scour Pipe				
2.9.1	Supply and install 4m long, 200mm diameter GI class "B" flanged pipe, include for welding wall rugs	No	1		
2.9.2	200mm GI socket	No	2		
2.9.3	200mm GI plug	No	1		
	Total Bill 2				

3	Rerouting				
3.1	Provide all materials and fittings, excavate for and reroute DN 315mm upvc pipeline as instructed	LM	20		
3.2	Allow for survey works	SUM			
	Total Bill 3				

SUMMARY PAGE		
Bill No	Description	Amount (Kes)
1	Preliminaries and General Items	
2	Intake Works, Wing Walls and River bank Protection	
3	Rerouting	
	Sub-Total 1	
3	Allow 5 % contingencies of sub-total 1	
	Sub-Total 2	
4	Add 16 % VAT	
	Grand Total	

PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VIII - GENERAL CONDITIONS OF CONTRACT

These General Conditions of Contract (GCC), read in conjunction with the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

General Conditions of Contract

A. General

1. Definitions

1.1 Bold face type is used to identify defined terms.

- a) **The 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.
- b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- c) **The Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- e) **Compensation Events** are those defined in GCC Clause 42 hereunder.
- f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- g) **The Contract** is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.
- i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.
- j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
- k) **Days** are calendar days; months are calendar months.
- l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- m) **A Defect** is any part of the Works not completed in accordance with the Contract.
- n) **The Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- p) **Drawings** means the drawings of the Works, as included in the Contract, and any

additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

- q) **The Procuring Entity** is the party who employs the Contractor to carry out the Works, **as specified in the SCC**, who is also the Procuring Entity.
- r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- s) **“In writing” or “written”** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.
- u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- w) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- y) **SCC** means Special Conditions of Contract.
- z) **The Site** is the area of the works as **defined as such in the SCC**.
- aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- ff) **A Variation** is an instruction given by the Project Manager which varies the Works.
- gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

2 Interpretation

- 21 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 22 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works

(other than references to the Completion Date and Intended Completion Date for the whole of the Works).

- 23 The documents forming the Contract shall be interpreted in the following order of priority:
- a) Agreement,
 - b) Letter of Acceptance,
 - c) Contractor's Bid,
 - d) Special Conditions of Contract,
 - e) General Conditions of Contract, including Appendices,
 - f) Specifications,
 - g) Drawings,
 - h) Bill of Quantities⁶, and
 - i) any other document **listed in the SCC** as forming part of the Contract.

⁶In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

3 Language and Law

- 3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when
 - a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country; or
 - 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 from that country or any payments to any country, person, or entity in that country.

4 Project Manager's Decisions

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

5 Delegation

- 5.1 Otherwise **specified in the SCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6 Communications

- 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7 Subcontracting

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

8 Other Contractors

- 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as **referred to in the SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

9 Personnel and Equipment

- 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the

Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

- 93 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

10. Procuring Entity's and Contractor's Risks

- 10.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Procuring Entity's Risks

- 11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:

- a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.

- b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

- 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to

- aa) a Defect which existed on the Completion Date,
- bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or
- cc) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

- 12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Procuring Entity's risks are Contractor's risks.

13. Insurance

- 13.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

- a) loss of or damage to the Works, Plant, and Materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and

d) personal injury or death.

132 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

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

134 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

135 Both parties shall comply with any conditions of the insurance policies.

14. Site Data

141 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works

151 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date

161 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager

171 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

172 The Contractor shall be responsible for design of Temporary Works.

173 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

174 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

175 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety

181 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

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

20. Possession of the Site

- 20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC**, the Procuring Entity shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site

- 21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions, Inspections and Audits

- 22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
- 22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Procuring Entity and/or persons appointed by the Public Procurement Regulatory Authority to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

23. Appointment of the Adjudicator

- 23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

24. Settlement of Claims and Disputes

24.1 Contractor's Claims

- 24.1.1 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 Project Manager, 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.

- 24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.
- 24.1.3 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.
- 24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Procuring Entity's liability, the Project Manager 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 Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.
- 24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a 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 Project Manager may reasonably require; and
 - c) the Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Project Manager.
- 24.1.6 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 Project Manager and approved by the Contractor, the Project Manager 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.
- 24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause
- 24.1.8 [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.
- 24.1.9 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.

24.1.10 If the Project Manager does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 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 24.3.

242 Amicable Settlement

24.2.1 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 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

243 Matters that may be referred to arbitration

24.3.1 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) The appointment of a replacement Project Manager upon the said person ceasing to act.
- b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- e) Any dispute arising in respect of war risks or war damage.
- f) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

244 Arbitration

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.

24.4.2 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.

24.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

24.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

24.4.5 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 requirement or notice had been given.

24.4.6 The arbitrators shall have full power to open up, review and revise any certificate,

determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

24.4.7 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.

24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.

24.4.9 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

245 Arbitration with National Contractors

24.5.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

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

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

246 Alternative Arbitration Proceedings

24.6.1 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.

247 Failure to Comply with Arbitrator's Decision

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

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

248 Contract operations to continue

24.8.1 Notwithstanding any reference to arbitration herein,

- a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- b) the Procuring Entity shall pay the Contractor any monies due the Contractor.

25. Fraud and Corruption

25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.

252 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

B. Time Control

26. Program

261 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

262 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

263 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

264 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

271 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

272 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

281 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.

282 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

29. Delays Ordered by the Project Manager

- 29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

- 30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

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

C. Quality Control

32. Identifying Defects

- 32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

33. Tests

- 33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

- 34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

35. Uncorrected Defects

- 35.1 If the Contractor has not corrected a Defect within the time specified in the Project

Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

36. Contract Price⁷

36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

37. Changes in the Contract Price⁸

37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.

37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

38. Variations

38.1 All Variations shall be included in updated Programs⁹ produced by the Contractor.

38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

⁷*In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:*

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

⁸*In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:*

The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

⁹*In lump sum contracts, add "and Activity Schedules" after "Programs."* ¹⁰*In lump sum contracts, delete this paragraph.*

- 385 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning
- 386 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work
- 387 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;
- a) the proposed change(s), and a description of the difference to the existing contract requirements;
 - b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
 - c) a description of any effect(s) of the change on performance/functionality.
- 388 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:
- a) accelerate the contract completion period; or
 - b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
 - c) improve the quality, efficiency, safety or sustainability of the Facilities; or
 - d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.
- 389 If the value engineering proposal is approved by the Procuring Entity and results in:
- a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or
 - b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in
 - (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

- 39.1 When the Program¹¹, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

- 40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 40.3 The value of work executed shall be determined by the Project Manager.
- 40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed¹².
- 40.5 The value of work executed shall include the valuation of Variations and Compensation

Events.

- 406 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- 407 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

41. Payments

- 41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

- 42.1 The following shall be Compensation Events:
- d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
 - e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
 - f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - h) The Project Manager unreasonably does not approve a subcontract to be let.
 - i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
 - j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.
 - k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

- l) The advance payment is delayed.
- m) The effects on the Contractor of any of the Procuring Entity's Risks.
- n) The Project Manager unreasonably delays issuing a Certificate of Completion.

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

423 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

424 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

43. Tax

431 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currency of Payment

441 All payments under the contract shall be made in Kenya Shillings

45. Price Adjustment

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

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

where:
the portion of the Contract Price payable.

P is the adjustment factor for

A and B are coefficients¹³ **specified in the SCC**, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and I_m is the index prevailing at the end of the month being invoiced and I_o is the index prevailing 30 days before Bid opening for inputs payable.

452 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention

461 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

462 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in

accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an “on demand” Bank guarantee.

47. Liquidated Damages

- 47.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.
- 47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

- 48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

49. Advance Payment

- 49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the **SCC** by the date stated in the **SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.
- 49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
- 49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

- 50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC**, by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Dayworks

- 51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the

Project Manager has given written instructions in advance for additional work to be paid for in that way.

512 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

513 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

52. Cost of Repairs

521 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

531 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

54. Taking Over

541 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

55. Final Account

551 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

56. Operating and Maintenance Manuals

561 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

562 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

57. Termination

571 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

572 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other

than for a reconstruction or amalgamation;

- d) a payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;
- e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- f) the Contractor does not maintain a Security, which is required;
- g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**;
or
- h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

573 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.

574 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

575 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58. Payment upon Termination

581 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

582 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

SECTION IX - SPECIAL CONDITIONS OF CONTRACT

Except where otherwise specified, all Special Conditions of Contract should be filled in by the Procuring Entity prior to issuance of the bidding document. Schedules and reports to be provided by the Procuring Entity should be annexed.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
A. General	
GCC 1.1 (q)	The Procuring Entity is <i>[insert name, address, and name of authorized representative]</i> .
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be ninety (90) days from the date of letter of commencement.
GCC 1.1 (x)	The Project Manager is: The NIE Coordinator
GCC 1.1 (z)	The Site is located at Thome, Laikipia County along River Narumoru
GCC 1.1 (cc)	The Start Date shall be as per the commencement letter.
GCC 1.1 (gg)	The Works consist of: As per the Bill of Quantities.
GCC 2.2	Sectional Completions are: N/A
GCC 5.1	The Project manager may delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: N/A
GCC 9.1	<p>Key Personnel GCC 9.1 is replaced with the following:</p> <p>9.1 Key Personnel are the Contractor’s personnel named in this GCC 9.1 of the Special Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p>
GCC 13.1	<p>The minimum insurance amounts and deductibles shall be:</p> <p>(a) for loss or damage to the Works, Plant and Materials: 100% of the contract amount</p> <p>(b) For loss or damage to Equipment: 100% of the contract amount</p> <p>(c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract: KSh.500,000</p> <p>(d) for personal injury or death: KSh.10,000,000</p>

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	of the Contractor's employees and of other people.
GCC 14.1	Site Data are: N/A
GCC 20.1	The Site Possession Date(s) shall be: As per the letter of commencement
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: Chartered Institute of Arbitrators (Kenya Branch)
	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: As recommended by the Chartered Institute of Arbitrators (Kenya Branch)
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within Seven (7) days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is thirty (30) days. The amount to be withheld for late submission of an updated Program is: N/A
C. Quality Control	
GCC 34.1	The Defects Liability Period is: 90 days.
D. Cost Control	
GCC 38.9	If the value engineering proposal is approved by the Procuring Entity the amount to be paid to the Contractor shall be: N/A
GCC 44.1	The currency of the Procuring Entity's Country is: Kenyan Shilling
GCC 45.1	The Contract is not subject to price adjustment in accordance with GCC Clause 45.
GCC 46.1	The proportion of payments retained is: N/A
GCC 47.1	The liquidated damages for the whole of the Works are: N/A
GCC 48.1	The Bonus for the whole of the Works is: N/A
GCC 49.1	The Advance Payments shall be: Up to 20% of the contract price upon submission by the successful tenderer of an advance payment security equivalent to the advance itself and that security shall be given by a reputable bank or any authorized financial institution issued by a corresponding bank in Kenya recognized by the Central Bank of Kenya
GCC 50.1	The Performance Security amount is: N/A
E. Finishing the Contract	
GCC 56.1	The date by which operating and maintenance manuals are required is within the defects liability period. The date by which "as built" drawings are required is within the defects

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	liability period.
GCC 56.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is equal to the retention amount.
GCC 57.2 (g)	The maximum number of days is: N/A
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity’s additional cost for completing the Works, is 100% .

FORM No 1: NOTIFICATION OF INTENTION TO AWARD

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. 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 Intention to Award**

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) Country: *[insert country where ITT is issued]*
- v) ITT No: *[insert ITT reference number from Procurement Plan]*

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**

Submit a Procurement-related Complaint in relation to the decision to award the contract.

a) The successful tenderer

i) Name of successful Tender _____

ii) Address of the successful Tender _____

iii) Contract price of the successful Tender Kenya Shillings _____ (in words _____)

b) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

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 deadline 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]*
 - ii) Agency: *[insert name of Procuring Entity]*
 - iii) Email address: *[insert email address]*
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint

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

- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website info@ppra.go.ke or complaints@ppra.go.ke.
You should read these documents before preparing and submitting your complaint.
- e) There are four essential requirements:
 - i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.
 - ii) The complaint can only challenge the decision to award the contract.
 - iii) You must submit the complaint within the period stated above.
 - iv) You must include, in your complaint, all of the information required to support your complaint.

7. **Standstill Period**

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

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

Signature: _____ **Name:** _____

Title/position: _____ **Telephone:** _____ **Email:** _____

FORM NO. 2 - REQUEST FOR REVIEW

FORM FOR REVIEW(r.203(1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

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

BETWEEN

.....**APPLICANT**

AND

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

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

REQUEST FOR REVIEW

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

- 1.
- 2.

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

- 1.
- 2.

SIGNED(Applicant) Dated on.....day of/...20.....

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on.....day of20.....

SIGNED

Board Secretary

FORM NO 3: LETTER OF AWARD

[letterhead paper of the Procuring Entity] [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 *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by (*name of Procuring Entity*).

You are requested to furnish the Performance Security within 30 days 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 _____ Procuring
Entity.....

Attachment: *Contract Agreement*.....

FORM NO 4: CONTRACT AGREEMENT

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

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

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - a) the Letter of Acceptance
 - b) the Letter of Tender
 - c) the addenda Nos ____ (if any)
 - d) the Special Conditions of Contract
 - e) the General Conditions of Contract;
 - f) the Specifications
 - g) the Drawings; and
 - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by _____ (for the Procuring Entity)

Signed and sealed by _____ (for the Contractor).

FORM NO. 5 - PERFORMANCE SECURITY

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[insert name and Address of Procuring Entity]* **Date:** _____

_____ *[Insert date of issue]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with (name of Procuring Entity) _____ (the Procuring Entity as the Beneficiary), for the execution of _____ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (in words),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the Day of, 2.....², and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[Name of Authorized Official, signature(s) and seals/stamps].

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

¹*The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.*

²*Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM No. 6 - PERFORMANCE SECURITY

[Option 2- Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of Procuring Entity]*

Date: _____ *[Insert date of issue].*

PERFORMANCE BOND No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond _____ as Principal (hereinafter called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Obligee (hereinafter called “the Procuring Entity”) in the amount of _____ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____ day of _____, 20 , for _____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
 - 1) complete the Contract in accordance with its terms and conditions; or
 - 2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
 - 3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.
4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.
6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day__of____20____.

SIGNED ON _____ on behalf of By _____ in the capacity of

In the presence of

SIGNED ON _____ on behalf of By _____ in the capacity of

In the presence of

FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[Insert name and Address of Procuring Entity]*

Date: _____ *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: _____ *[Insert guarantee reference number]*

Guarantor: _____ *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ (in words) is to be made against an advance payment guarantee.
3. At the request of the Contractor, we as Guarantor, hereby 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, or on the _____ day of _____, 2nd, ² whichever is earlier. Consequently, a 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.

¹*The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.*

²*Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM NO. 8 - RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[Insert name and Address of Procuring Entity]*

Date: _____ *[Insert date of issue]*

Advance payment guarantee no. *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Contractor") has entered into Contract No. _____ *[insert reference number of the contract]* dated _____ with the Beneficiary, for the execution of _____ *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to 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 demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number _____ at _____ *[insert name and address of Applicant's bank]*.
5. This guarantee shall expire no later than the Day of, 2.....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 actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

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

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [insert identification no]

Name of the Tender Title/Description: _____ [insert name of the assignment] to: _____ [insert complete name of Procuring Entity]

In response to the requirement in your notification of award dated _____ [insert date of notification of award] to furnish additional information on beneficial ownership: [select one option as applicable and delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

Details of beneficial ownership

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
Full Name		Directly--	Directly.....		

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
1.	National identity card number or Passport number	----- % of shares% of voting rights Indirectly---- -----% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes - ----No---- 2. Is this right held directly or indirectly?: Direct..... Indirect.....	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes ----No--- - 2. Is this influence or control exercised directly or indirectly? Direct..... Indirect..... ...
	Personal Identification Number (where applicable)	Indirectl y----- % of shares			
	Nationality				
	Date of birth [dd/mm/yyyy]				
	Postal address				
	Residential address				
	Telephone number				
	Email address				
	Occupation or profession				
2.	Full Name	Directly-- ----- % of shares	Directly.....% of voting rights Indirectly---- -----% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes - ----No----	1. Exercises significant influence or control over the Company body of the Company (tenderer)
	National identity card number or Passport number				
	Personal Identification Number	Indirectl y----- % of shares			

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
(where applicable)		of shares		2. Is this right held directly or indirectly? Direct..... Indirect.....	Yes -----No-- --
Nationality(ies)					2. Is this influence or control exercised directly or indirectly?
Date of birth [dd/mm/yyyy]					Direct.....
Postal address					Indirect.....
Residential address					Direct.....
Telephone number					Indirect.....
Email address					Direct.....
Occupation or profession					Indirect.....
3. e. t. c					

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal*

Identification Number, Date of birth, Residential address, email address and Telephone number.

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company; or
- (d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer:[insert complete name of the Tenderer]*

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

Designation of the person signing the Tender: [insert complete title of the person signing the Tender]

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

Date this [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp