



REPUBLIC OF KENYA

**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING
AND URBAN DEVELOPMENT.**

STATE DEPARTMENT FOR PUBLIC WORKS

TENDER DOCUMENT

TENDER No: MoLPWHUD/SPDW/001/2023-2024

COMPLETION OF NDAU SEAWALL

LAMU COUNTY

WP ITEM NO: D109 CO/ LAM 2301

JOB NO. 9781B

PROCURING ENTITY

STATE DEPARTMENT FOR PUBLIC WORKS

P.O. BOX 30743 – 00100

NAIROBI

CLIENT/ EMPLOYER

PRINCIPAL SECRETARY

STATE DEPARTMENT OF PUBLIC WORKS

P.O. BOX 30743 – 00100

NAIROBI

NOVEMBER 2023

INVITATION TO TENDER

PROCURING ENTITY: *STATE DEPARTMENT FOR PUBLIC WORKS*

CONTRACT NAME AND DESCRIPTION: *COMPLETION OF NDAU*

SEAWALL – LAMU COUNTY.

1. The *State Department for Public Works* invites sealed tenders for the completion of construction of NdaU seawall and Kizingitini seawall in Lamu County. The brief overview of the scope of works is as described here below:
 - *Construction of seawall using concrete blocks.*
 - *Backfilling behind the constructed seawall with approved soil materials to make up levels.*
 - *Construction of concrete paved walkways, staircases, mooring bollards and boat slipways along the constructed seawall.*
 - *Repair of existing seawall.*
2. Tendering is open to all qualified and interested Tenderers.
3. Qualified and interested tenderers registered by the National Construction Authority in category NCA 1- 4 may obtain further information and inspect the Tender Documents during office hours 0800 to 1700 *hours* at the address given below.
4. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of a non- refundable fees of *Kenya Shillings One Thousand (Ksh 1000)* in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website(s) www.publicworks.go.ke or www.tenders.go.ke. Tender documents obtained electronically will be free of charge.
5. Tender documents may be viewed and downloaded for free from the website www.publicworks.go.ke or www.tenders.go.ke. Tenderers who download the tender document must forward their particulars immediately to **Supplychain management office room 916** to facilitate any further clarification or addendum.
6. Tenders shall be quoted in Kenya Shillings and shall include all taxes. Tenders shall remain valid for 154 days from the date of opening of tenders.
7. All Tenders must be accompanied by **Tender Security of KShs. 4,000,000 (Four Million only)** from a reputable bank licensed by the Central Bank of Kenya or an Insurance Company approved by the Public Procurement Authority (PPRA). **Bid security must remain valid for 189 days after bid submission deadline.**
8. The Tenderer shall chronologically serialise all pages of the tender documents submitted.
9. Completed tenders must be delivered to the address below on or before 30th November 2023 at 11.00am.

The Principal secretary,
State Department for Public Works
P.O. Box 30743-00100
Nairobi
10. Tenders will be opened publicly immediately thereafter in the presence of the Tenderers or representatives who choose to attend at the Transcom House, KBRC board on the ground floor.

- 11. There will be a mandatory site visit and pre-bid conference meeting for all prospective bidders on 23rd November, 2023 at 11.00am. Tenderers or their representatives are advised to assemble at the KPA office, Lamu at 4.00 p.m. on 22nd November, 2023 in order to be briefed on the trip to the sites by the Engineers Representative**
12. Late tenders will be rejected.

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PART 1 - TENDERING PROCEDURES

SECTION I -

INSTRUCTIONS TO TENDERERS

A GENERAL PROVISIONS

1. Scope of Tender

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 Tenderers shall permit and shall cause their agents (where declared or not), subcontractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, pre-qualification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.
- 2.4 Unfair Competitive Advantage -Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, 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.

3. EligibleTenderers

- 3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.8, or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of JVmembers 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 goods or 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 a consultant for 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 personal relationship with senior management or professional staff of the Procuring Entity who has the ability to influence the bidding process and:
 - i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; or
 - ii) may be involved in the implementation or supervision of such Contract unless the 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.
- 34 A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified.
- 35 A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender.
- 36 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT3.9. 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.
- 37 A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA www.ppra.go.ke.
- 38 A Tenderer that is a state-owned enterprise or a public institution in Kenya may be eligible to tender and be awarded a Contract(s) only if it is determined by the Procuring Entity to meet the following conditions, i.e. if it is:
 - i) A legal public entity of Government and/or public administration,
 - ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and
 - iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.
- 39 Firms and individuals shall be ineligible if their countries of origin are:
 - a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, 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, local subcontracts and labor) from citizen suppliers and contractors. To this end, a foreign tenderer shall provide 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 for this purpose in *“SECTION III-EVALUATION AND QUALIFICATION*

CRITERIA, Item 9”.

- 3.11 Pursuant to the eligibility requirements of ITT4.10, 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 be eligible to tender if it provides evidence of having fulfilled his/her tax obligations by producing a valid tax compliance or valid tax 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 ineligible under ITT3.9. 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 and inspect the Site of the Works and its surroundings and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be 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 up on 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 examination and inspection.
- 5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

B. CONTENTS OF TENDER DOCUMENTS

6 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 ITT10.

PART 1: Tendering Procedures

Section I: Instructions to Tenderers

Section II: Tender Data Sheet
(TDS)

Section III: Evaluation and Qualification
Criteria Section IV: Tendering Forms

PART 2: Works' Requirements

Section V: Bills of Quantities
Section VI: Specifications
Section VII: Drawings

PART3: Conditions of Contract and Contract

Forms Section VIII: General Conditions (GCC)
Section IX: Particular Conditions of Contract Section
X: Contract Forms

- 62 The Invitation to Tender Notice issued by the Procuring Entity is not part of the Contract documents.
- 63 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 10. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.
- 64 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. Clarification of Tender Document, Site Visit, Pre-Tender Meeting

- 7.1 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 if provided for in accordance with ITT 7.2. 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 7.4, including a description of the inquiry but without identifying its source. If so 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 following the procedure under ITT 8 and ITT 22.2.
- 72 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the site(s) of the required contracts and obtain all information that may be necessary for preparing a tender. The costs of visiting the Site shall be at the Tenderer's own expense. The Procuring Entity shall specify in the **TDS** if a pre-arranged Site visit and or a pre-tender meeting will be held, when and where. The Tenderer's designated representative is invited to attend a pre-arranged site visit and a pre-tender meeting, as the case may be. The purpose of the site visit and the pre-tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 73 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.
- 74 Minutes of a pre-arranged site visit and those of the pre-tender meeting, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents. Minutes shall not identify the source of the questions asked.
- 75 The Procuring Entity shall also promptly publish anonymized (*no names*) Minutes of the pre-arranged site visit and those of the pre-tender meeting at the web page identified **in the TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-arranged site visit and those of the pre-tender meeting shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Non-attendance at the pre-arranged site visit and the pre-tender meeting will not be a cause for disqualification of a Tenderer.

8 Amendment of Tender Documents

- 8.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tender Documents by issuing addenda.
- 8.2 Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's website in accordance with ITT 7.5.
- 8.3 To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity should extend the deadline for the submission of Tenders, pursuant to ITT 22.2.

C. PREPARATION OF TENDERS

9 Cost of Tendering

The Tenderer shall meet 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.

10 Language of Tender

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

11 Documents Comprising the Tender

- 11.1 The Tender shall comprise the following:
- a) Form of Tender prepared in accordance with ITT 12;
 - b) Schedules including priced Bill of Quantities, completed in accordance with ITT 12 and ITT 14;
 - c) Tender Security or Tender-Securing Declaration, in accordance with ITT 19.1;
 - d) Alternative Tender, if permissible, in accordance with ITT 13;
 - e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.3;
 - f) Qualifications: documentary evidence in accordance with ITT 17 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
 - g) Conformity: a technical proposal in accordance with ITT 16;
 - h) Any other document required in the TDS.
- 11.2 In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.

12 Form of Tender and Schedules

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

13. Alternative Tenders

- 13.1 Unless otherwise specified in the TDS, alternative Tenders shall not be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.
- 13.3 Except as provided under ITT13.4 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.
- 13.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

14. Tender Prices and Discounts

- 14.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.
- 14.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by 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.
- 14.3 The price to be quoted in the Form of Tender, in accordance with ITT 12, shall be the total price of the Tender, including any discounts offered.
- 14.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 12
- 14.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.
- 14.6 Where tenders are being invited for individual lots (contracts) or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

15. Currencies of Tender and Payment

- 15.1 The currency (ies) of the Tender and the currency (ies) of payments shall be the same.
- 15.2 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings

- a) A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya (referred to as “the foreign currency requirements”) shall (if so allowed in the **TDS**) indicate in the Appendix to Tender the percentage(s) of the Tender Price (excluding Provisional Sums), needed by the Tenderer for the payment of such foreign currency requirements, limited to no more than two foreign currencies.
- b) The rates of exchange to be used by the Tenderer in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Tenderer in the Appendix to Tender and shall be based on the exchange rate provided by the Central Bank of Kenya on the date 30 days prior to the actual date of tender opening. Such exchange rate shall apply for all foreign payments under the Contract.

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

16. Documents Comprising the Technical Proposal

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

17. Documents Establishing the Eligibility and Qualifications of the Tenderer

- 17.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.
- 17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.
- 17.3 If a margin of preference applies as specified in accordance with ITT 33.1, national tenderers, individually or in joint ventures, applying for eligibility for national preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.
- 17.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contract or 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 possibility of collusion between tenderers, and there by help to prevent any corrupt influence in relation to the procurement process or contract management.
- 17.5 The purpose of the information described in **ITT 17.2** 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.
- 17.6 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 6.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 17.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to 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.
- 17.8 If a tenderer fails to submit the information required by these requirements, its tenderer 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.

- 179 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 on going, 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.
- 17.10 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 17.8 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 tender.

18. Period of Validity of Tenders

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

18.2 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 19, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting their quest shall not be required or permitted to modify its Tender.

19. Tender Security

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

192 If a Tender Security is specified pursuant to ITT19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

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

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

194 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.

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

196 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**.

- 197 The Tender Security may be forfeited or the Tender-Securing Declaration executed:
- a) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension there to provided by the Tenderer; or
 - b) if the successful Tenderer fails to:
 - i) sign the Contract in accordance with ITT 47; or
 - ii) furnish a Performance Security and if required in the TDS, and any other documents required in the TDS.
- 198 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.
- 199 The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.
- 19.10 A tenderer shall not issue a tender security to guarantee itself.

20. Format and Signing of Tender

- 20.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 11 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 13, 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.
- 20.2 Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.
- 20.3 The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation 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.
- 20.4 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 so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

D. SUBMISSION AND OPENING OF TENDERS

21. Sealing and Marking of Tenders

- 21.1 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 13, 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.

- 212 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 were misplaced or opened prematurely will not be accepted.

22 Deadline for Submission of Tenders

- 221 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**.

- 222 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.

23 Late Tenders

The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 22. 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.

24 Withdrawal, Substitution, and Modification of Tenders

- 241 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 20.3, (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 20 and ITT 21 (except that withdrawal 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 22.

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

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

25 Tender Opening

- 251 Except in the cases specified in ITT 23 and ITT 24.2, 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 and anyone who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS**.

- 252 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.

- 253 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.

- 254 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.
- 255 Next, all remaining envelopes shall be opened on eata 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.
- 256 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bill of Quantities (to be decided on by the tender opening committee) are to be initialed by the members of the tender opening committee attending the opening.
- 257 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 23.1).
- 258 The Procuring Entity shall prepare minutes of the Tender Opening that shall include, as a minimum:
- The name of the Tenderer and whether there is a withdrawal, substitution, or modification;
 - The Tender Price, per lot (contract) if applicable, including any discounts;
 - any alternative Tenders;
 - the presence or absence of a Tender Security, if one was required.
 - number of pages of each tender document submitted.
- 259 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 tender opening register shall be issued to a tenderer upon request.

E. EVALUATION AND COMPARISON OF TENDERS

26. Confidentiality

- 261 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 43.
- 262 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.
- 263 Notwithstanding ITT 26.2, 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.

27. Clarification of Tenders

- 27.1 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 31.
- 27.2 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.

28. Deviations, Reservations, and Omissions

- 28.1 During the evaluation of tenders, the following definitions apply:
- “Deviation” is a departure from the requirements specified in the tender document;

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

29. Determination of Responsiveness

- 29.1 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 11.
- 29.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:
- a) 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.
- 29.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 16, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.
- 29.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30. Non-material Non-conformities

- 30.1 Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.
- 30.2 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 of time, 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.
- 30.3 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.

31. Arithmetical Errors

- 31.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in anyway by any person or entity.
- 31.2 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, sub total and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
 - c) If there is a discrepancy between words and figures, the amount in words shall prevail
- 31.3 Tenderers shall be notified of any error detected in their bid during the notification of award.

32 Conversion to Single Currency

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

33 Margin of Preference and Reservations

- 33.1 A margin of preference may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.
- 33.2 A margin of preference shall not be allowed unless it is specified so in the **TDS**.
- 33.3 Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 33.4.
- 33.4 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by the authority to be specified in the **TDS**, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

34 Nominated Subcontractors

- 34.1 **Unless** otherwise stated **in the TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. Incase the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- 34.2 Tenderers may propose subcontracting upto the percentage of total value of contracts or the volume of works as specified **in the TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.
- 34.3 Domestic subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated so by 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.

35 Evaluation of Tenders

- 35.1 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 Lowest Evaluated Tender in accordance with ITT 40.
- 35.2 To evaluate a Tender, the Procuring Entity shall consider the following:
- Price adjustment in accordance with ITT 31.1(iii); excluding provisional sums and contingencies, if any, but including Day work items, where priced competitively;
 - Price adjustment due to discounts offered in accordance with ITT 14.4;
 - converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 32;
 - price adjustment due to quantifiable non material non-conformities in accordance with ITT 30.3; and
 - any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be considered intender evaluation.

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

36. Comparison of Tenders

The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 35.2 to determine the Tender that has the lowest evaluated cost.

37. Abnormally Low Tenders and Abnormally High

Tenders Abnormally Low Tenders

- 37.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.
- 37.2 In the event of identification of a potentially Abnormally Low Tender, 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.
- 37.3 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.

Abnormally High Tenders

- 37.4 An abnormally high tender price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that 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.
- 37.5 Incase of an abnormally high 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.
- 37.6 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.

38. Unbalanced and/or Front-Loaded Tenders

- 38.1 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.

- 382 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 10% 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,

39. Qualifications of the Tenderer

- 39.1 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.
- 39.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 17. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.
- 39.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in disqualification of the Tender, in which event 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.

40. Lowest Evaluated Tender

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

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

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

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

F. AWARD OF CONTRACT

42. Award Criteria

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

43. Notice of Intention to enter into a Contract

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 stand still period;

44. Stand still Period

- 421 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.
- 422 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.

45. Debriefing by the Procuring Entity

- 451 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.
- 452 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

46. Letter of Award

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

47. Signing of Contract

- 471 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.
- 472 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- 473 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

48. Performance Security

- 481 Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 38.2 (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.
- 482 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.
- 483 Performance security shall not be required for contract estimated to cost less than the amount specified in the Regulations.

49. Publication of Procurement Contract

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.

50. Procurement related Complaints and Administrative Review

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

50.2 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.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
A. General	
ITT 1.1	<p>The name of the contract is COMPLETION OF NDAU SEAWALL IN LAMU COUNTY.</p> <p>The reference number of the Contract is W.P. ITEM NO: D109 CO/LAM 2301 JOB NO: 9781B.....</p> <p>The number and identification of lots (contracts) comprising this Tender is ONE only consisting of construction of seawall, staircases, ramps and boat slipways at Ndaui and Kizingitini Islands, Lamu County.</p>
ITT 2.3	<p>The Information made available on competing firms is as follows:</p> <hr/> <ol style="list-style-type: none"> 1. Instructions to tenderers 2. Bills of quantities 3. Conditions of contract (PPRA 2022) 4. Specifications 5. Drawings <hr/>
ITT 2.4	<p>The firm(s) that provided consulting services for the contract being tendered for is: STATE DEPARTMENT FOR PUBLIC WORKS P. O. BOX 30743-00100, NAIROBI</p> <hr/> <p><u>Project Manager:</u> Chief Engineer (Structural).</p> <p><u>Project Structural/Civil engineer:</u> Chief Engineer (Structural).</p> <p>.</p>
ITT 3.1	Maximum number of members in the Joint Venture (JV) shall be: THREE.
ITT 3.12	Valid NCA Registration Certificate and Practicing License in the required category; shall be provided as detailed in the Evaluation/Qualification Criteria SECTION IV

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.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
B. Contents of Tender Document	
ITT 7.1	<p>(i) The Tenderer will submit any request for clarifications in writing at the Address</p> <p style="text-align: center;">Principal Secretary, State Department for Public Works, Works Building, Ngong road, P. O. Box 30743-00100 NAIROBI.</p> <p style="text-align: center;">Tel No. +254 (0)20 2723101 Email Address: info@publicworks.go.ke</p> <p>to reach the Procuring Entity not later than 5 days before the tender submission date.</p> <p>(ii) The Procuring Entity shall publish its response at the website www.publicworks.go.ke</p>
ITT 7.2	There will be a mandatory site visit and pre-bid conference meeting for all prospective bidders on 23rd November, 2023 at 11.00am. Tenderers or their representatives are advised to assemble at the KPA office, Lamu at 4.00 p.m. on 22nd November, 2023 in order to be briefed on the trip to the sites by the Engineers Representative
ITT 7.3	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 3 days before the meeting.
ITT 7.5	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender will be published is website www.publicworks.go.ke
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 style="text-align: center;">Principal Secretary, State Department for Public Works, Works Building, Ngong road, P. O. Box 30743-00100 NAIROBI.</p> <p style="text-align: center;">Tel No. +254 (0)20 2723101 Email Address: info@publicworks.go.ke</p>
C. Preparation of Tenders	
ITT 11.1 (h)	<p>The Tenderer shall submit the following additional documents in its Tender:</p> <ol style="list-style-type: none"> Valid Copy of certificate of incorporation/ Registration certified by the issuing

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.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
	<p>authority or an Advocate of the High Court.</p> <ol style="list-style-type: none"> 2. Contractor's National Construction Authority Current Annual Practicing license. 3. National Construction Authority registration certificate (NCA 1-4). 4. Valid Current Tax Compliance Certificate issued by Kenya Revenue Authority. 5. Dully filled and signed Confidential business questionnaire. 6. Valid Copy of Current Single Business permit. 7. Submission of valid CR12 form showing the list of directors /shareholding (issued within the last 3 months) or National Identity Card(s) for Sole Proprietorship/ Partnership. 8. Submission of original tender document (including supportive document) properly TAPE BOUND and paginated in the correct sequence and all pages must be Initialed or signed or stamped. NB: Spiral Binding and use of Spring or Box Files will not be allowed and will result in automatic disqualification. 9. Letter of authority to seek references from the Tenderer's bankers. 10. Provide proof of Power of attorney where applicable. 11. Submit certified copies of Audited accounts (Signed by Auditors and directors) for the last three (3) years (2020, 2021, 2022 and/or 2023).
ITT 13.1	Alternative Tenders shall not be considered.
ITT 13.2	Alternative times for completion shall not be permitted.
ITT 13.4	Alternative technical solutions shall not be permitted
ITT 14.5	The prices quoted by the Tenderer shall be: fixed.
ITT 15.2 (a)	Foreign currency requirements not applicable .
ITT 18.1	The Tender validity period shall be 154 Days
ITT 18.3	<p>(a) The Number of days beyond the expiry of the initial tender validity period will be 30 days.</p> <p>(b) The Tender price shall be adjusted by the following percentages of the tender price:</p> <p>(i) By 0% of the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension,</p> <p>and</p> <p>(ii) By 0% the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.</p>
ITT 19.1	Tenderer shall provide a Tender Security of Kenya Shillings 4,000,000 (Four Million only) . The type of Tender security shall be a Bank Guarantee from a reputable bank or a Guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority, or a Guarantee issued by a financial institution approved and licensed by the Central Bank. The security should be valid for 30 days beyond the tender validity period.
ITT 20.1	In addition to the original of the Tender, the number of copies is: ONE
ITT 20.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of a written power of attorney
D. Submission and Opening of Tenders	

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.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
ITT 22.1	<p>(A) For <u>Tender submission purposes only</u>, the Procuring Entity's address is:</p> <p>(1) Name of Procuring Entity: State Department for Public Works</p> <p>(2) Postal Address: P. O. Box 30743-00100, NAIROBI.</p> <p>(3) Physical address for hand Courier Delivery to Works Building Room 916 or Tender Box located on 9th floor Works Building.</p> <p>Date and time for submission of Tenders:- on or before 30th November 2023 at 11.00am</p> <p>Tenderers shall submit tenders electronically if allowed in the tender advertisement notice.</p>
ITT 25.1	<p>The Tender opening shall take place at the time and the address for Opening of Tenders provided below:</p> <p>(1) Name of Procuring Entity: State Department for Public Works.</p> <p>(2) Physical address for the location as indicated in the Tender advertisement / tender invitation letter.</p> <p>(3) State date and time of tender opening as indicated in the Tender advertisement / tender invitation letter.</p>
ITT 25.1	If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures (hand copies only)
ITT 25.6	<p>The number of representatives appointed to the Tender Opening Members of the Procuring Entity to sign is at least three.</p> <p>The Committee shall initial the pages as agreed</p>
E. Evaluation, and Comparison of Tenders	
ITT 30.3	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 31.2	An error if determined a major deviation shall lead to disqualification.
ITT 32.1	<p>The currency that shall be used for Tender evaluation and comparison purposes only to convert at the selling exchange rate all Tender prices expressed in various currencies into a single currency is: Kenya shillings.</p> <p>The source of exchange rate shall be: The Central bank of Kenya (mean rate)</p> <p>The date for the exchange rate shall be: the deadline date for Submission of the Tenders.</p> <p><i>For comparison of Tenders, the Tender Price, corrected pursuant to ITT 31, shall first be broken down into the respective amounts payable in various currencies by using the selling exchange rates specified by the Tenderer in accordance with ITT 15.1.</i></p> <p><i>In the second step, the Procuring Entity will convert the amounts in various currencies in which the Tender Price is payable (excluding Provisional Sums but including Daywork where priced competitively) to the single currency identified above at the selling rates established for similar transactions by the authority specified and, on the date, stipulated above.</i></p>
ITT 33.2	A margin of preference shall not apply.
ITT 33.4	<p>The invitation to tender is extended to the following group that qualify for Reservations: N/A</p> <p><i>(These groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be; describe precisely which group qualifies).</i></p>

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.	
Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERERS
ITT 34.1	At this time, the Procuring Entity <i>intends</i> to execute certain specific parts of the works by subcontractors.
ITT 34.2	Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: <i>10% of the total contract amount</i> . 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.
ITT 34.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: <i>(Specialized Subcontractors are not required.)</i> For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation.
ITT 35.2 (e)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 48.1	Other documents required in addition to the performance security are 1. Program of Works / Progress Chart 2. Insurance.
ITT 50.1	<p>The procedures for making a Procurement-related Complaint are detailed in the "Notice of Intention to Award the Contract" herein and are also available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke.</p> <p>If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to:</p> <p>For the attention: <u>as indicated in the Tender advertisement / tender invitation letter.</u></p> <p>Title/position: <u>as indicated in the Tender advertisement / tender invitation letter.</u></p> <p>Procuring Entity: State Department for Public Works.</p> <p>Email address: info@publicworks.go.ke</p> <p>In summary, a Procurement-related Complaint may challenge any of the following (among others):</p> <p>(i) the terms of the Tender Documents; and</p> <p>(ii) the Procuring Entity's decision to award the contract.</p>

SECTION III- EVALUATION AND QUALIFICATION CRITERIA

General Provisions

1. General Provisions

- 1.1 This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. The Procuring Entity shall use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.
- 1.2 Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:
- For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
 - Value of single contract - Exchange rate prevailing on the date of the contract signature.
 - Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.
- 1.3 Evaluation and contract award Criteria

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

2. 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 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 Works Requirements”, including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report for Goods and Works for evaluating Tenders provides clear guidelines on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

[The Procuring Entity will provide the preliminary evaluation criteria. To facilitate, a template may be attached or clearly described all information and list of documentation to be submitted by Tenderers to enable preliminary evaluation of the Tender]

3. Tender Evaluation (ITT 35)

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

- Alternative Completion Times**, if permitted under ITT 13.2, will be evaluated as follows:
.....
- Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows :.....
- Other Criteria**; if permitted under ITT 35.2(d) :.....

4. Multiple Contracts

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

OPTION 1

- If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.
- If a tenderer wins more than one Lot, the tender will be awarded contracts for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the Lots. The tenderer

will be awarded the combination of Lots for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

OPTION 2

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

5. Alternative Tenders (ITT 13.1)

An alternative if permitted under ITT 13.1, will be evaluated as follows:

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part2-Works Requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring

6. MARGIN OF PREFERENCE

- 61 If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded one valuated price of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty-one percent (51%).
- 62 Contractors applying for such preference 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 particular contract or or group of contractors qualifies for a margin of preference.
- 63 After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders to shall be classified into the following groups:
- i) GroupA: tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).
 - ii) GroupB: tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).
- 64 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 3.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group Band the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

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

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.
- b) Incase the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.
 - i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings_____.
 - ii) Minimum average annual construction turnover of Kenya Shillings_____ [insert amount], equivalent calculated as total certified payments received for contracts in progress and/or completed within the last_____)_____ [insert of year] years.

- iii) At least _____ (*insert number*) of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings _____ equivalent.
 - iv) Contractor's Representative and Key Personnel, which are specified as _____
 - v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as [*specify requirements for each lot as applicable*] _____
 - vi) Other conditions depending on their seriousness.
- a) **History of non-performing contracts:**
Tenderer and each member of JV incase the Tenderer is a JV, shall demonstrate that Non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last _____ (*specify years*). The required information shall be furnished in the appropriate form.
- b) **Pending Litigation**
Financial position and prospective long-term profitability of the Single Tenderer, and in the case the Tenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.
- c) **Litigation History**
There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last _____ (*specify years*). All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

EVALUATION /QUALIFICATION CRITERIA

To be qualified for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to provide latest information set out in the evaluation criteria.

After tender opening, the tenders will be evaluated in 4 stages, namely:

1. Preliminary examination;
2. Detailed Technical Examination.
3. Financial Evaluation.
4. Post qualification
5. Recommendation for award

STAGE 1: PRELIMINARY EXAMINATION

The Tenderer shall submit the following **MANDATORY** documents in their Tender:

Item No.	Qualification Subject	Document To be Completed Attached	Qualification Requirements to be Met	Requirements met or Not Met
MR 1	Form of Tender	Form of Tender	Form of Tender in the format described in ITT 12.1; - Completed without alterations to the text. - Properly filled on the tenderer's letter head and signed by authorized persons.	
MR 2	Nationality/ Directors	Forms ELI – 1.1 and 1.2	Nationality in accordance with ITT 3.6 and 3.9; - Attach proof of Citizenship and Directors' shareholding. - Filled, signed and stamped Tender Information - Attach valid copy of CR12 or CR13 not older than 3 months	
MR 3	Tax Obligations for Kenyan Tenderers	Tax Compliance Certificate or Tax Exemption Certificate	Has produced a current and valid Tax Compliance Certificate or Tax Exemption Certificate issued by Kenya Revenue Authority in accordance with ITT 3.14.	
MR 4	Conflict of Interest	Confidential Business Questionnaire	No conflicts of interest in accordance with ITT 3.3; - Properly Filled, Stamped and Signed Confidential business questionnaire	
MR 5	PPRA Eligibility / Debarment on PPADA	Self-Declaration (Form SD1)	Not having been declared ineligible by the PPRA as described in ITT 3.7; - Form filled and duly signed.	
MR 6	Independent Tender Determination	Certificate of Independent Tender Determination	- Properly Filled, Stamped and Signed - 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 ITT 17.7	
MR 7	Self-Declaration on Corruption / Fraudulent Practices	Form – SD2	- Properly Filled, Stamped and Signed - A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified as per ITT 3.4 and Section 62 PPAD ACT 2015	

MR 8	Code of Ethics	Declaration and Commitment to the Code of Ethics Form	-Properly filled, Stamped and Signed - 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. Section 66 of PPAD ACT 2015.	
MR 9	Serialization of the document	Tender document	-Tender Document should be Paginated/ serialized/ numbered in a sequential manner on all pages and all attachments as per ITT 12.1 & TDS	
MR 10	Companies Registration/ Incorporation	Incorporation	-Attach valid copies of Certificate of Incorporation certified by the issuing authority or an Advocate of the High Court.	
MR 11	Companies Registration with NCA	Registration with NCA	-Attach certified copies NCA (4 and above) Registration Certificate of the relevant field (Building and Road Works). -Attach a valid NCA Annual Practicing License	
MR 12	Submission of Tender	Tender Document	-Must submit ONE ORIGINAL and ONE COPY of the Tender Document (All Volumes). - All bidders own corrections must be countersigned - Documents should be TAPE/BOOK BOUND (Use of Spring or box files will not be accepted and will lead to automatic disqualification.	
MR 13	Allowed to do business	Business Permit	-Attach a valid Trade license and/or Single Business permit/Unified Business Permit issued by relevant government body/agency for 2023.	
MR 14	Tender Security	Bid bond/ Tender Security	Tenderer shall provide a Tender Security of Kenya Shillings Four million Only (KShs. 4,000,000.00). The type of Tender security shall be a Bank Guarantee from a reputable bank or a Guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority, or a Guarantee issued by a financial institution approved and licensed by the Central Bank. The security should be valid for 30 days beyond the tender validity period.	
MR 15	Power Attorney	Attach letter	Power of attorney/ Authorization Letter duly signed (should be signed by directors appearing in CR12/13) or by the director of the firm with the highest shares, giving the name of person who has been authorized to submit/execute this agreement as a binding document and this person should sign all the documents related to this tender.	
MR16	Audited Accounts	certified copies of Audited accounts	Submit certified copies of Audited accounts (Signed by Auditors and directors) for the last three (3) years (2020,2021 and 2022). (Certified by an advocate).	

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

STAGE 2: TECHNICAL EVALUATION

Notes:

- Assessment for eligibility: The tender document shall be examined based on ITT 16 and 17 of the Instruction to Tenderers.
- The tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility and their capability and adequacy of resources to effectively carry out the subject contract.
- The tenderers shall be required to fill the Standard Forms provided in the bid document for the purposes of providing the required information. The tenderers must also attach evidence where necessary.

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

S/NO.	PARAMETER	MAXIMUM POINTS
(i)	Key personnel (attach CVs)	20
(ii)	Contract Completed in the last five (5) years	18
(iii)	Schedule of on-going projects	2
(iv)	Schedules of contractor's equipment and tools	20
(v)	Audited Financial Report for the last 3 years	10
(vi)	Evidence of Financial Resources	20
(vii)	Litigation History	2
(viii)	Works Program, Work Methodology, Mobilization Plan & Safety Management	8
	TOTAL	100

The detailed scoring plan shall be as shown in Table 1 below: -

TABLE 1: Assessment for Eligibility

ITEM	DESCRIPTION	POINTS
(i)	Key Personnel (Attach evidence)	
	At least one (1No.) Director of the firm (relevant Civil/Structural Engineering or any other Construction Related Field): <ul style="list-style-type: none"> • Holder of Degree/Higher Diploma in relevant Engineering field.....5 • Holder of diploma in relevant Engineering field.....4 • Holder of certificate in relevant Engineering field.....3 • Holder of trade test certificate in relevant Engineering field.....2 • No relevant certificate.....1 	
	At least one (1No.) degree/diploma holder of key personnel in Civil/Structural, or any other Construction Related Field: <ul style="list-style-type: none"> • With over 10 years relevant experience in marine works.....5 • With over 5 years relevant experience in marine works.....3 • Below 5 years relevant experience in marine works.....1 	
	At least one (1No.) certificate holder of key personnel in Civil/Structural, or any other Construction Related Field: <ul style="list-style-type: none"> • With over 10 years relevant experience.....5 • With over 5 years relevant experience.....3 • Below 5 years relevant experience.....1 	
	At least 2No artisans (trade test certificate in relevant Engineering/Construction related field): <ul style="list-style-type: none"> • Over 10 years relevant experience.....5 • Over 5 years relevant experience.....3 • Below 5 years relevant experience.....1 	

(ii)	<p>Contracts completed in the last five (5) years (Max of 3No. Projects) -Provide Evidence (Contract Agreement and Completion Certificate)</p> <ul style="list-style-type: none"> • Project of similar nature, complexity or magnitude.....18 • Project of similar nature but of lower value than the one in consideration.....12 • No completed project of similar nature.....0 	
(iii)	<p>Schedule of On-going projects – Provide Evidence (Award letter and Contract Agreement)</p> <ul style="list-style-type: none"> • No Project of similar nature, complexity and magnitude.....2 • Three and below Projects of similar, nature complexity and magnitude.....1 • Four and above Projects of similar nature, complexity and magnitude.....0 	
(iv)	<p>Schedule of contractor's equipment and transport (proof or evidence of ownership/Lease)</p> <p>a) Relevant Transport</p> <ul style="list-style-type: none"> • Means of transport (Barge/potoon, Boat, Dumper, Trucks/ Tippers- 2 marks each and any other relevant 1 mark each)10 • No means of transport0 <p>b) Relevant Tools and Equipment (for excavation, Air lifting, diving, concreting, hoisting, welding, scaffolding, pumping water, power supply, compaction – 1 marks each category)</p> <ul style="list-style-type: none"> • Has relevant equipment for work being tendered.....10 • Has no relevant equipment for work being tendered.....0 	
(v)	<p><u>Audited Financial Reports (Main Contractor)</u></p> <p>Average Annual Turnover (From Audited Accounts for the last 3 years (2020, 2021, and 2022) for Contractor.</p> <ul style="list-style-type: none"> • Average Annual Turn-over equal to or greater than the cost of the project.....10 • Average Annual Turn-over above 50% but below 100% of the cost of the project.....7 • Average Annual Turn-over below 50% of the cost of the project.....3 	
(vi)	<p>Evidence of Financial Resources (cash in hand, lines of credit, over draft facility etc.)- Bank/Creditors/Letters to be current and specific to that contract)</p> <ul style="list-style-type: none"> • Has financial resources to finance the projected monthly Cash flow*for three months.....20 • Has financial resources equal to the projected monthly cash flow.....15 • Has financial resources less the projected monthly cash flow.....8 • Has not indicated sources of financial resources.....0 	
(vii)	<p>Litigation History/ (Contractor)- affidavit signed and stamped by an Attorney/Commissioner for Oaths:</p> <ul style="list-style-type: none"> • No litigation involved in the past 5 years.....2 • Affidavit shows history of litigation involved in the past 5 years.....1 • No affidavit attached to show litigation history.....0 	
(viii)	<p>Should attach a Works programme, methodology of works, Mobilization plan and Safety management plan to proof that it can complete the above works within 104 weeks contract period if awarded.</p> <ul style="list-style-type: none"> • Works Program.....2 • Work Methodology.....2 • Mobilization Plan.....2 • Safety Management Plan.....2 	
	TOTAL POINTS	

The pass-mark under the Technical Evaluation is 70 percent. Any bidder who scores below the pass mark will be considered Non-Responsive.

*Monthly Cash Flow =Tender Sum/Contract Period

STAGE 3: FINANCIAL EVALUATION.

Upon completion of the technical evaluation, a detailed financial evaluation shall follow. The financial evaluation shall proceed in the manner described in the Public Procurement and Asset Disposal Act (2015).

The evaluation shall be in three stages

- a) Determination of the Corrected Tender Sums;
- b) Comparison of Rates for major components of Works; and
- c) Consistency of the Rates

A. Determination of errors

The evaluation committee will be guided by the following provisions in error determination:

- (i) Section 82 of the PPADA, 2015 requires that 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.
- (ii) Section 74 (2) of the PPADR, 2020 states that subject to section 79(2) (b) of the Act, any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive.

Further, the committee will be guided as per the tender document under Instructions to Tender; clause 31.0 as follows:

31.0 Arithmetical Errors

31.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.

31.2 Provided that the Tender is substantially responsive, 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

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

B) Comparison of Rates for the bidder

The evaluation committee will compare the tenderers quoted rates with the prevailing market rates. Any tender which in the opinion of the procuring entity is seriously front-loaded shall be disqualified.

C) Consistency of the Rates

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

STAGE 4 – POST QUALIFICATION

*Particulars of post – qualification if applicable. The Employer, State Department for Public Works may **conduct due diligence** to seek further clarification/confirmation, to confirm authenticity/ compliance of any condition of the tender /qualifications of the tenderer in line with **Section 83 of the Public Procurement and Asset Disposal Act, 2015.***

RECOMMENDATION FOR AWARD

The firm achieving the lowest evaluated price will be awarded the contract in line with Section 86 of the Public Procurement and Disposal Act, 2015. The lowest evaluated tender shall be rejected if misrepresentation of information or facts is detected during post qualification evaluation.

SECTION IV - TENDERING FORMS

QUALIFICATION FORMS

1. FOREIGN TENDERERS 40% RULE.
2. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE
3. Form EQU: EQUIPMENT.
4. FORM PER -1.
5. FORM PER-2.
6. TENDERERS QUALIFICATION WITHOUT PRE-QUALIFICATION.
 - 6.1 FORM ELI-1.1.
 - 6.2 FORM ELI-1.2.
 - 6.3 FORM CON –2.
 - 6.4 FORM FIN –3.1.
 - 6.5 FORM FIN –3.2.
 - 6.6 FORM FIN –3.3.
 - 6.7 FORM FIN –3.4.
 - 6.8 FORM EXP -4.1.
 - 6.9 FORM EXP - 4.2(a).
 - 6.9 FORM EXP - 4.2 (a) (cont.).
 - 6.10 FORM EXP -4.2 (b).

OTHER FORMS

7. FORM OF TENDER.
8. FORM OF TENDER SECURITY - DEMAND BANK GUARANTEE.
9. FORM OF TENDER SECURITY (TENDER BOND).
10. FORM OF TENDER-SECURING DECLARATION.
11. APPENDIX TO TENDER.
12. CERTIFICATE OF PRE-TENDER SITE VISIT

TECHNICAL PROPOSAL FORMS

Site Organization.

Method Statement.

Mobilization Schedule.

Construction Schedule.

QUALIFICATION FORMS

1. FOREIGN TENDERERS 40% RULE

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

ITEM	Description of Work Item	Describe location of Source	COST in K. shillings	Comments, if any
A	Local Labor			
1				
2				
3				
4				
5				
B				
1				
2				
3				
4				
5				
C	Local materials			
1				
2				
3				
4				
5				
D				
1				
2				
3				
4				
5				
E				
1				
2				
3				
4				
5				
6				
	TOTAL COST LOCAL CONTENT		XXXXX	
	PERCENTAGE OF CONTRACT PRICE		XXXX	

3. 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	

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	

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

5. FORM PER-2:

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

Name of Tenderer		
Position [#1]: [title of position from Form PER-1]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: [language and levels of speaking, reading and writing skills]	
Details		
	Address of Procuring Entity:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	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 under signed *[insert either "Contractor's Representative" or "Key Personnel" as applicable]*, certify that to the Lowest 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 Tenderevaluation;
- b) result in my disqualification from participating in theTender;
- 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 theTenderer:

Signature: _____

Date: (day month year): _____

6. TENDERERS 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.

61 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>[icate 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/Faxnumbers: _____ E-mailaddress: _____
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: • 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

62 **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 43.6. <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, a list of Board of Directors, and the beneficial ownership.

63 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			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 st January <i>[insert year]</i> 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			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.			
<input type="checkbox"/> 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:	

I Litigation History in accordance with Section III, Evaluation and Qualification Criteria

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

64 FORM FIN –3.1:

Financial Situation and Performance

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

6.4.1. 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*

642 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		

643 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:

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

Attached are copies of financial statements ¹ for the _____ years required above; and complying with the requirements

6.5 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
[indicate year]	[insert amount and indicate currency]		
Average Annual Construction Turnover *			

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

¹If 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.

6.6 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 cashflow demands of the subject contractor contracts as specified in Section III, Evaluation and Qualification Criteria.

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

6.7 FORMFIN–3.4:

Current Contract Commitments / Works in Progress

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

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

6.8 FORM EXP -4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name: _____

ITT No. and title: _____

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: _____	

6.9 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:				
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				

6.10 FORM EXP -4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

Sub-contractor's Name² (as per ITT34): _____

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:				

²If applicable

Address: Telephone/fax number E-mail:	Information
---	--------------------

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

2 Activity No. Two

3.....

OTHER FORMS

7. FORM OF TENDER

INSTRUCTIONS TO TENDERERS

- i) *The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.*
- ii) *All italicized text is to help Tenderer in preparing this form.*
- iii) *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.*
- iv) *The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.*
 - *Tenderer's Eligibility-Confidential Business Questionnaire.*
 - *Certificate of Independent Tender Determination.*
 - *Self-Declaration of the Tenderer.*

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

To: *[insert complete name of 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 Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Particular 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 8;
 - 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) **Option1**, incase of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies]*; Or

Option2, in case of multiple lots:

- a) *Total price of each lot* *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]*; and
- b) *Total price of all lots* (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]*;
- vii) **Discounts:** The discounts offered and the methodology for their application are:
- viii) The discounts offered are: *[Specify in detail each discount offered.]*
- ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;
- x) **Tender Validity Period:** Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1(as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- xi) **Performance Security:** If our Tender is accepted, we commit to obtain 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 ITT3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
- xiii) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, Engineer, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.
- xiv) **State-owned enterprise or institution:** *[select the appropriate option and delete the other]* *[We are not a state-owned enterprise or institution]/[We are a state-owned enterprise or institution but meet the requirements of ITT 3.7]*;
- 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) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
 - a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
 - b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
 - 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.

i) 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

ii) Sole Proprietor, provide the following details.

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

iii) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

(iv) 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				

(v) 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 controlled by or is under common control with another Tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		

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.		

(vi) 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]

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.

(Title)

(Signature)

(Date)

Bidder Official Stamp

FORM SD2

SELF DECLARATION THAT THE 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 corruptive practice with other bidders participating in the subject tender
5. THAT what is deposed 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

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

2. Requirements

- 2.1 The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.
- 2.2 Kenya's public procurement and asset disposal act (*no. 33 of 2015*) under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior:
- 1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
 - 2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
 - 3) Without limiting the generality of the subsection (1) and (2), the person shall be—
 - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
 - b) if a contract has already been entered into with the person, the contract shall be voidable;
 - 4) The voiding of a contract by 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 director 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.
- 2.3 In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:
- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:

- i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii) “fraudulent practice” is any act or omission, including 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.

¹ For 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.

2. FORM OF TENDER SECURITY - DEMAND BANK GUARANTEE

Beneficiary: _____

Request for Tenders No: _____

Date: _____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (herein after called "the Tender") for the execution of _____ under Request for Tenders No. _____ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
 - a) Has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension there to 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 thereto 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) 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.

[signature(s)]

3. FORM OF TENDER SECURITY (TENDER BOND) [The Surety shall fill in

this Tender Bond Form in accordance with the instructions indicated.] BOND NO. _____

1. BY THIS BOND [name of tenderer] as Principal (herein after called “the Principal”), and [name, legal title, and address of surety], **authorized to transact business in** [name of country of Purchaser], as Surety (herein after called “the Surety”), are held and firmly bound unto [name of Purchaser] as Obligee (herein after called “the Purchaser”) in the sum of [amount of Bond]⁵[amount in words], for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.
2. WHERE AS the Principal has submitted or will submit a written Tender to the Purchaser dated the _____ Day of _____, 20, for the supply of [name of Contract] (herein after called the “Tender”).
3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:
 - (a) Has 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 Purchaser 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 Purchaser's Tendering document.then the Surety undertakes to immediately pay to the Purchaser up to the above amount upon receipt of the Purchaser's first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.
4. The Surety hereby agrees that its obligation will remain in full force and effect upto and including the date 30 days after the date of expiration of the Tender Validity Period set forth in the Principal's Letter of Tender or any extension thereto provided by the Principal.
5. IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this day of _____ 20.

Principal: _____
Corporate Seal (where appropriate)

(Signature)
(Printed name and title)

Surety: _____

(Signature)
(Printed name and title)

⁵The amount of the Bond shall be denominated in the currency Kenya shillings or the equivalent amount in a freely convertible currency.

4. **FORM OF TENDER-SECURING DECLARATION**

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

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

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

To:..... *[insert complete name of*

Purchaser] I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of 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

5. APPENDIX TO TENDER

Schedule of Currency requirements

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

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

6 CERTIFICATE OF PRE-TENDER SITE VISIT

1. This is to certify that I,
..... (Name of Tenderer or Representative)
of the Firm.....
.....
..... (Name of the Firm Tendering)
2. Having previously studied the Bidding Documents I carefully examined the site.
3. I have made myself familiar with all the local conditions likely to influence the Tender and the cost thereof.
4. I further certify that; I am satisfied with description of the scope of the works and that I understand perfectly the work to be done as specified and implied in the Conditions of this Invitation to Tender.
5. I also confirm that M/S
..... (Name of the Firm Tendering)
Will Perform the contract in accordance with the Terms and Conditions of this Invitation to Tender.

Signed Date
(Tenderer or Representative)

Witness
(Engineer's Representative)

Signed Date

7. TECHNICAL PROPOSAL

The tender shall complete these sections as a Technical proposal to indicate how he/she intends to proceed with the works. The Procuring entity will review these Proposals and determine the extent to which they meet the required standards to complete the works.

71 Site Organization

[insert Site Organization information]

72 Method Statement

[insert Method Statement]

73 Mobilization Schedule

[insert Mobilization Schedule]

74 Construction Schedule

[insert Construction Schedule]

PART 2 - WORKS' REQUIREMENTS

SECTION V - BILLS OF QUANTITIES

A. Preamble

1. The method of measurement of completed work for payment shall be in accordance with latest edition of the Civil Engineering Standard Method of Measurement (CESMM).
2. The Sites are situated in Ndau and Kizingitini villages in Lamu County. These villages are in two separate Islands in Lamu County. The sites can be approached by road via Malindi to Lamu or by air through Manda Airport in Lamu. Either way one will use boat to travel to Ndau and Kizingitini. It takes about **one and a half hours to reach Kizingitini from Lamu by speedboat and a further fifteen minutes to get to Ndau village from Kizingitini.** The Contractor shall visit the sites and acquaint themselves with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.
3. The Contractor shall obtain the Engineer's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Engineer approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. Two sets of the Working Drawings shall be provided to the contractor but additional copies shall be provided at a cost to be determined by the Engineer.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Engineer May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub- Contractor involve.
8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim for extension of time due to the normal inclement weather for this area shall be entertained.
9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to be carried out, with the appropriate dates thereof. This Chart shall be agreed with the Engineer and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.
10. The Contractor shall submit to the Engineer on the first day of each week or such longer period as the Engineer from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative progress on all-important items of each section or portion of the Works.
11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent are as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Engineer shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the

date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Engineer within two weeks of exposure.

12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.
13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Engineer and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging, if necessary, to locate precisely the position and details of the services which are likely to affect his operations.
14. The Contractor shall include in his prices for the transport of materials, workmen, etc./, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.
15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.
16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.
17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.
18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.
19. The Contractor shall constantly keep on the Works a Literate English-speaking Agent or Representative, competent and experienced in the kind of work involved, who shall give his whole time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contract or directions and instruction from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.
20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects. The site shall be kept tidy and clear of dangerous rubbish. The Engineer shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.
21. They are as available to the Contractor for work yards, offices and other facilities shall be directed by the Engineer and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source then at own cost.
22. The Contractor shall give the Engineer reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Engineer shall not relieve the Contractor of his duties or responsibilities under the Contract.

23. The Contractor must take steps necessary to safe guard and shall beheld fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused there on, and he shall indemnify the Procuring Entity against any loss or claim that may arise.
24. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
25. The Contractors attention is drawn to the standards levy order which was amended on 15thOctober 1998.Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from January 1999. Tenderer shall allow for this in the build-up of his rates.
26. The Contractor shall provide temporary sheds, offices mesh rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
27. Contractor shall provide/build labor camps at areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
28. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
29. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
30. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.
31. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
32. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
33. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Engineer until the completion of the Contract.
34. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and tore move all paint and cement all rubbis hand dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.
35. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
36. The Contractors shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the Engineer for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples, when approved, shall be the minimum standard for the work to which they apply. The

procedure or submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.

37. The Contractors attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractual

payment section 35(7)(i)(ii) which became effective on 1st July 2000. A 3% withholding tax will be applicable to all interim payments exceeding for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting there from in the build-up of rates.

38. Blasting will only be allowed with the express permission of the Engineer in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Engineer governing the use and storage of explosives.
39. The National Construction Authority is a state corporation established under the National Construction Authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6th June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.
40. The Contractor attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT 1.19 as instructed elsewhere.
41. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

B. Work Items

The Bills of Quantities usually contains the following part Bills, which have been grouped according to the nature or timing of the work:

Bill No. 1: General Items;

Bill No. 2: Earthworks;

Bill No. 3: Culverts and Bridges;

Bill No. 4: etc., as required;

Daywork Schedule; and

Summary Bills of Quantities.

⁶The method of measurement should be spelled out precisely in the Preamble to the Bills of Quantities, describing for example the allowances (if any) for timbering in excavation, etc. Many national standard reference guides have been prepared on the subject, and one such guide is the Standard Method of Measurement of the U.K. Institution of Civil Engineers.

1. If TDS-ITT 15.1 (a) applies, Tenderers shall price the Bills of Quantities in local currency only and shall indicate in the Appendix to Tender the percentage expected for payment in foreign currency or currencies. If TDS-ITT 15.1 (b) applies Tenderers shall price the Bills of Quantities in the applicable currency or currencies.

[Note to the Procuring Entity: The tables in BOQ must be prepared in accordance with the currency alternative retained in TDS – ITT 15.1.]

C. Schedule of Daywork

Rates

- i) A "Daywork Schedule" is commonly found in contracts where the likely incidence of unforeseen work cannot be covered by definitive descriptions and approximate quantities in the Bills of Quantities. The preferred alternative is to value the additional work in accordance with the Conditions of Contract. A Daywork Schedule normally has the disadvantage of not being competitive among Tenderers, who may therefore load the rates as signed to some or all the items. If a Daywork Schedule is to be included at all in the tendering documents, it is preferable to include nominal quantities against the items most likely to be used, and to carry the sum of the extended amounts forward into the Tender Summary in order to make the basic Schedule of Daywork Rates competitive.
- ii) The total amount assigned to such competitive daywork is normally 3–5 percent of the estimated base Contract Price and is regarded as a Provisional Sum for contingencies to be expended under the direction and at the discretion of the Engineer.]

1. General

Reference should be made to Sub-Clause 13.6 of the General Conditions. Work shall not be executed on a day work basis except by written order of the Engineer. Tenderers shall enter basic rates for day work items in the Schedules, which rates shall apply to any quantity of day work ordered by the Engineer. Nominal quantities have been indicated against each item of daywork, and the extended total for Daywork shall be carried forward as a Provisional Sum to the Summary Total Tender Amount. Unless otherwise adjusted, payments for day work shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

2. Daywork Labor

- 21 In calculating payments due to the Contract or for the execution of day work, the hours for labor will be reckoned from the time of arrival of the labor at the job site to execute the particular item of day work to the time of return to the original place of departure, but excluding meal breaks and rest periods. Only the time of classes of labor directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
- 22 The Contractor shall be entitled to payment in respect of the total time that labor is employed on daywork, calculated at the basic rates entered by the Contractor in the **Schedule of Daywork Rates: 1. Labor**, together with an additional percentage payment on basic rates representing the Contractor's profit, overheads, etc., as described below:
 - a) The basic rates for labor shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labor, transportation time, overtime, subsistence allowances, and any sums paid to or on behalf of such labor for social benefits in accordance with [country of Procuring Entity] law. The basic rates will be payable in local currency only.
 - b) The additional percentage payment to be quoted by the Tenderer and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities, and insurances and allowances to labor, time keeping, and clerical and office work, the use of consumable stores, water, lighting, and power; the use and repair of stagings, scaffolding, workshops, and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in the following currency proportions:
 - i) foreign: _____ percent (to be stated by Tenderer)⁹.
 - ii) local: _____ percent (to be stated by

Tenderer). [*Note to the Procuring Entity:*

This method of indicating profit and overheads separately facilitates the addition of further items of daywork, if needed, the basic costs of which can then be checked more easily. An alternative is to make Daywork rates all-inclusive of the Contractor's overhead and profit, etc., in which case this paragraph and the relevant Daywork Schedule should be modified accordingly.]

3. Daywork Materials

The Contractor shall be entitled to payment in respect of materials used for daywork (except for materials for which the cost is included in the percentage addition to labor costs as detailed hereto fore), at the basic rates entered by the Contractor in the **Schedule of Daywork Rates: 2. Materials**, together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:

- a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the Site. The basic rates shall be stated in local currency, but payment will be made in the currency or currencies expended upon presentation of supporting documentation.
- b) the additional percentage payment shall be quoted by the Tenderer and applied to the equivalent local currency payments made under (a) above. Payments under this item will be made in the following currency proportions:
 - i) foreign: _____ percent (to be stated by the Tenderer)¹⁰;
 - ii) local: _____ percent (to be stated by the Tenderer);
- c) the cost of hauling materials for use on work ordered to be carried out as daywork from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for Labor and Construction in this schedule.

4. Daywork Contractor's Equipment

- 4.1 The Contractor shall be entitled to payments in respect of Contractor's Equipment already on Site and employed on daywork at the basic rental rates entered by the Contractor in the **Schedule of Daywork Rates: 3. Contractor's Equipment**. Said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit, and administrative costs related to the use of such equipment.

[Note to the Procuring Entity: This is an example of wording to include overhead and profit, etc., in the daywork rates. A separate percentage addition could be used as for labor and materials.] The cost of drivers, operators, and assistants will be paid for separately as described under the section on Daywork Labor. *[Note to the Procuring Entity: An alternative, sometimes adopted for administrative convenience, is to include the cost of drivers, operators, and assistants in the basic rates for Contractor's Equipment. The last sentence of this paragraph 5 should then be modified accordingly.]*

- 4.2 In calculating the payment due to the Contractor for Contractor's Equipment employed on daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the traveling time from the part of the Site where the Contractor's Equipment was located when ordered by the Engineer to be employed on daywork and the time for return journey thereto shall be included for payment.
- 4.3 The basic rental rates for Contractor's Equipment employed on daywork shall be stated in local currency, but payments to the Contractor will be made in currency proportions, as follows:
- a) foreign: _____ percent (to be stated by the Tenderer)¹¹.
 - b) local: _____ percent (to be stated by the Tenderer).

⁹The Tenderer shall state the percentage in a common foreign currency equivalent required for payment and the exchange rates and official sources used. ¹⁰The Tenderer shall state the percentage in a single foreign currency equivalent and the exchange rates and official sources used.

¹¹The Tenderer shall state the percentage in a single foreign currency equivalent and the exchange rates and official sources used.

BILLS OF QUANTITIES

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 1: PRELIMINARIES AND GENERAL ITEMS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS.	KSHS.	CTS
1.01	Allow for the administrative cost for acquiring insurance for the works for the duration of contract.	SUM				
1.02	Allow for the administrative cost for acquiring and submission of an acceptable performance bond.	SUM				
1.03	Allow for KShs. 1,500,000 for purchase of Non-Destructive Testing (NDT) equipments.	SUM			1,500,000	
1.04	Allow % for contractor's overhead and profit on item 1/03.	%				
1.05	Provide and erect project signboard to Engineer's approval.	No.	2			
1.06	Provide a provisional sum of Kshs.2,500,000 for the provision of approved hotel accommodation for the Engineer and his staff.	SUM			2,500,000	
1.07	Allow for contractor's overhead and profit on item 1/06.	%				
1.08	Allow a provisional sum of Kshs. 2,500,000.00 for air transport to and from Lamu for Engineer and his staff.	SUM			2,500,000	
1.09	Allow for contractor's overhead and profit on item 1/08.	%				
1.10	Allow for a provisional sum of KSh. 2,000,000 for payment of overtime and field allowance to the Resident Engineer.	SUM			2,000,000	
1.11	Allow for contractor's profit and overheads on item 1/10.	%				
1.12	Provide Laptop computer; core i7 10th Generation, 32GB RAM, 1TB SSD, 8GB integrated graphics card, windows 11 pro, 15.6" display as specified in Annex A (page 222).	No.	3			
CARRIED TO COLLECTION ON PAGE 82.....						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 1: PRELIMINARIES AND GENERAL ITEMS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS.	KSHS.	CTS
1.13	Provide a provisional sum for training of SDPW personnel of KShs. 1,500,000.00.	SUM			1,500,000	
1.14	Allow for contractor's profits and overheads on item 1/13.	%				
1.15	Allow a prime cost sum of KShs. 500,000.00 for purchase of stationery, equipments and reagents to be spent against receipts.	Sum			500,000	
1.16	Include percentage of PC sum in item 1/15 for the contractor's cost and profit.	%				
1.17	Provide 1 No. fridge of capacity 8 cubic feet for the R.E.	No.	1			
1.18	Provide 1 No. 2 burner gas cooker for the R.E.	No.	1			
1.19	Provide a rented Office for the Resident Engineer at Nda	Month	24			
1.20	Maintain for the duration of contract the Resident Engineer's office.	Month.	24			
1.21	Provide for the duration of contract furniture for the Resident Engineer's office as per schedule I (on page 117).	Month	24			
1.22	Provide and replace for the duration of contract all consumables in accordance with clause 23(2) on page 115.	Month	24			
1.23	Provide 1 No. rented two bed roomed house as accommodation for the Resident Engineer in Nda Village.	Month	24			
CARRIED TO COLLECTION ON PAGE 82.....						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 1: PRELIMINARIES AND GENERAL ITEMS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
1.24	Provide and maintain furniture for the housing accommodation as per attached schedule II (on page 117).	Sum				
1.25	Provide and Maintain LPG gas supply to the resident Engineer's house for the duration contract	Month	24			
1.26	Hire a speedboat to seat at least six people (to the approval of the Engineer) with fuel and coxwain for use by the Engineer for the duration of the Contract.	Month	24			
1.27	Allow for a Provisional Sum of Kshs. 2,500,000 for the preparation, submission of an environmental impact assessment report to NEMA and subsequent issuance of license.	SUM			2,500,000	
1.28	Allow for contractor's profit and overheads on item 1/27.	%				
1.29	Provide a new 4WD fully loaded double cabin pick-up of minimum diesel engine capacity 2400cc, inclusive multi-lock, special door lock, anti-hijack device and air conditioning to Engineer's approval as per attached specifications in Annex B (page 223).	SUM				
1.30	Provide a driver and maintain vehicle in accordance with manufacturer's specification for the first 5,000 km travelled in any calender month. (Payments on pro-rata rate basis)	Months	26			
1.31	Extra Over item 1/30 for distance in excess of 5,000 km traveled in any calender month.	Km	2000			
1.32	Extra Over item 1/29 for the vehicle to revert to the government.	SUM				
1.33	Allow KShs. 500,000 for modelling and branding of the project as directed by the Engineer	SUM			500,000	
1.34	Allow for contractor's profit and overheads on item 1/33.	%				
CARRIED TO COLLECTION ON PAGE 82.....						

MoLPWH&UD - STRUCTURAL DEPARTMENT

PROJECT: COMPLETION OF NDAU SEAWALL

BILL No. 1: PRELIMINARIES AND GENERAL ITEMS

	DESCRIPTION	AMOUNT	
		KSHS.	CTS.
	COLLECTION Total Carried from Page 79..... Total Carried from Page 80..... Total Carried from Page 81.....		
TOTAL CARRIED TO GRAND SUMMARY ON PAGE 104.....			

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<u>NDAU SEAWALL</u>					
2.01	Clear site of all obstacles, mangrove bushes, debris and dispose as directed by the Engineer on site.	SM	1000			
2.02	Ditto on the land side, grab roots and uproot trees girth not exceeding 300mm and dispose.	SM	50			
2.03	Set out works over land and water to the approval of the Engineer.	LM	340			
2.04	Excavate top soil to remove sea vegetation to a depth not exceeding 500mm, and dispose as directed by the Engineer.	CM	60			
2.05	Excavate in water – logged loose sand to a depth not exceeding 1.5m for construction of seawall foundation (rate to include cost of keeping sides of trenches vertical)	CM	160			
2.06	Provide gunny bags and fill them with a mixture of cement and sand, mix ratio 1:6 and place them in position. (selected boulders may act as replacement)	CM	100			
2.07	Cast In-situ 1500x500mm mass concrete footing using OPC class 25/20 (mix 1:1 ½:3)	CM	50			
2.08	Demolish the failed section of seawall and cart-away the debris as directed by the Engineer.	CM	120			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.09	Construct a 200mm thick concrete block wall sloping at 2:1, average height 3.5m with concrete block piers at 3m c/c as shown on the drawings. (Rate to include cost of making concrete blocks to class A1, stepping and pointing of wall joints)	SM	1200			
2.10	Provide weep-holes on the wall using 100mm diameter UPV pipes	NO.	1800			
2.11	Construct a stone pitch layer behind the sloping block wall, with weep-holes running through them – minimum thickness 300mm.	SM	1400			
2.12	Provide and place behind stone-pitch layer approved filter cloth as polyfelt TS 1000 or equivalent, held in position at the top and bottom by 50mm Ø mangrove poles. (Rate to include cost of stitching the consecutive pieces of filter cloth together – overlaps to be 300mm).	SM	1400			
2.13	Provide and consolidate in layers of 300mm sand fill behind the seawall and other areas as directed by the Engineer.	CM	14500			
2.14	Provide and arrange coral stone boulders at the toe.	CM	2400			
2.15	Provide 100mm diameter Upvc drain pipes at 3m c/c sloping towards the sea across the 200mm wide wave screen beam and finish off the inlet and outlet with cement /sand screed.	NO.	95			
2.16	Cast in-situ 200mm thick by 500mm high wave screen beam class 25/20, (in lengths of 2.0m cast alternately so that false cracks develop between adjacent lengths).	CM	50			
2.17	Plaster the wave screen beam all round.	SM	500			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	Pavement					
2.18	Excavate for 450x200mm mass concrete strip footing on the finished sand backfill level, compact and ram ready to receive concrete.	CM	500			
2.19	Provide and place selected rock boulders in two layers, thickness 300mm.	CM	80			
2.20	Cast in situ a strip footing, 450 x 200mm of mass concrete class 25/20, 1200mm below the finished sand backfill level.	CM	40			
2.21	Construct a concrete block wall, 1200mm high, 200mm thick to carry pavement slab (rate to include cost of making the concrete blocks).	SM	450			
2.22	Provide and place approved Hardcore, compacting it adequately in two layers between the stone pitch layer and the pavement wall thickness 300mm.	CM	180			
2.23	Provide and place approved murrum blinding, 50mm thick to receive the pavement concrete.	SM	450			
2.24	Cast in-situ 100mm pavement slab class 25/20, sloping 1:100 towards the sea (slabs to be in lengths of 2.0m cast alternately so that false cracks develop between adjacent slabs).	SM	550			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.25	Provide sawn and planed cypress timber 100x25mm in strips of 1.5m and place them on alternate concrete slabs in 2/24 to form the false cracks	LM	270			
2.26	Provide and place wrot shutters to sides of paved walkway and concrete wave screen beam.	SM	340			
2.27	Provide, spread and compact murram, 150mm thick, on the sand backfill next to the pavement slab.	SM	1500			
	<u>Repiar of worn-out sea wall</u>					
2.28	Chase and hack out vertical and horizontal Block wall cracks, eroded surface clean and use 1:3 cement: sand mortar and plaster to fill cracks and repair surface.	SM	2500			
2.29	Apply 20mm thick plaster to eroded surface of concrete masonry wall and wave screen beam (mix 1:1:3 - cement/lime/sand)	SM	7500			
	STORM WATER DRAINAGE					
2.30	Provide materials, excavate and construct open drains as shown on the drawings and at locations identified by the Engineer on site	LM.	100			
2.31	Provide, lay and joint precast concrete, 450mm diameter. Culverts to drain storm water from the open drains to the sea including all concrete bedding and haunching.	LM	10			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	BOAT SLIPWAY RAMP					
2.32	Allow for construction of purpose-made R.C. mooring (class 25/20) bollards and place at points as directed by the Engineer on site.	CM	5			
2.33	Cast in-situ class 25/20 mass concrete boat slipways ramp.	CM	20			
	STAIRCASE AT THE END OF NDAU BREAKWATER					
2.34	Excavate in water – logged loose sand to a depth not exceeding 1.5m (rate to include cost of keeping sides of trenches vertical)	CM	6			
2.35	Provide gunny bags and fill them with a mixture of cement and sand, mix ratio 1:6 and place them in position. (selected boulders may act as replacement)	CM	6			
2.36	Cast In-situ Class 25/20 mass concrete staircase.	CM	20			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<u>KIZINGITINI SEAWALL (extension)</u>					
2.37	Clear site of all obstacles and dispose as directed by the Engineer on site	SM	480			
2.38	Set out works over land and water	LM	100			
2.39	Excavate top soil to remove sea vegetation to a depth not exceeding 500mm, and dispose as directed by the Engineer.	CM	100			
2.40	Excavate in water – logged loose sand to a depth not exceeding 1.5m for construction of seawall foundation (rate to include cost of keeping sides of trenches vertical)	CM	300			
2.41	Provide gunny bags and fill them with a mixture of cement and sand, mix ratio 1:6 and place them in position. (selected boulders may act as replacement)	CM	300			
2.42	Cast In-situ 1500x500mm mass concrete footing using OPC class 25/20(mix 1:1 ½:3)	CM	80			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.43	Construct a 200mm thick concrete block wall sloping at 2:1, average height 3.5m. (Rate to include cost of making concrete blocks to class A1 and pointing of wall joints)	SM	1600			
2.44	Provide weep-holes on the wall using 100mm diameter UPV pipes	NO.	800			
2.45	Construct a stone pitch layer behind the sloping block wall, with weep-holes running through them – minimum thickness 300mm.	SM	1600			
2.46	Provide and place behind stone-pitch layer approved filter cloth as polyfelt TS 1000 or equivalent, held in position at the top and bottom by 50mm Ø mangrove poles. (Rate to include cost of stitching the consecutive pieces of filter cloth together – overlaps to be 300mm).	SM	2400			
2.47	Provide and consolidate in layers of 300mm sand fill behind the seawall and other areas as directed by the Engineer.	CM	10,000			
2.48	Provide, place and compact murrum in layers not exceeding 300mm next to the sand backfill to build up levels as directed by the Engineer.	CM	25,000			
2.49	Provide and arrange coral stone boulders on the toe	CM	585			
2.50	Cast in-situ 200mm thick by 500mm high wave screen beam class 25/20, (in lengths of 2.0m cast alternately so that false cracks develop between adjacent lengths).	CM	60			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL NO. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.51	Plaster the wave screen wall all round.	SM	575			
	Pavement					
2.52	Excavate for 450x200mm mass concrete strip footing on the finished sand backfill level, compact and ram ready to receive concrete.	CM	560			
2.53	Provide and place selected rock boulders in two layers, thickness 300mm.	CM	140			
2.54	Cast insitu a strip footing, 450 x 200mm of mass concrete class 25/20, 1200mm below the finished sand backfill level.	CM	50			
2.55	Construct a concrete block wall, 1200mm high, 200mm thick to carry pavement slab (rate to include cost of making the concrete blocks).	SM	480			
2.56	Provide and place approved Hardcore, compacting it adequately in two layers between the stone pitch layer and the pavement wall. Thickness 300mm.	CM	250			
2.57	Provide and place approved murram blinding, 50mm thick to receive the pavement concrete.	SM	690			
2.58	Cast in-situ 100mm pavement slab class 25/20, sloping 1:100 towards the sea (slabs to be in lengths of 2.0m cast alternately so that false cracks develop between adjacent slabs).	SM	690			
2.59	Provide and place wroth shutters to sides of paved walkway.	SM	150			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL NO. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.60	Provide sawn and planed cypress timber 100x25mm in strips of 1.5m and place them on alternate concrete slabs in 2/58 to form the false cracks	LM	350			
2.61	Provide, spread and compact murram, 150mm thick, on the sand backfill next to the pavement slab.	SM	10,800			
	<u>Storm water drains</u>					
2.62	Provide materials, excavate and construct open drains as shown on the drawings and at locations identified by the Engineer on site	LM	460			
2.63	Provide, lay and joint precast concrete, 450mm diameter. Culverts to drain storm water from the open drains to the sea including all concrete bedding and haunching.	LM	104			
	<u>Staircases</u>					
2.64	Provide materials and construct 6No. class 25/20 mass concrete staircases as per the drawings or as directed by the Engineer on site.	CM.	25			
2.65	Allow for construction of purpose-made R.C. mooring bollards and place at points as directed by the Engineer on site.	CM	10			
2.66	Provide and place wrot shutters for staircases.	SM	300			
2.67	Cast in-situ class 25/20 mass concrete boat slipways ramp.	CM	10			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT
PROJECT: COMPLETION OF NDAU SEAWALL

BILL NO. 2: CONCRETE WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<u>HIGH TENSILE BARS TO BS 4461</u> (Including bending and fixing)					
2.68	16mm diameter bar	KG	1,500			
2.69	12mm diameter bar	KG	1500			
2.70	10mm diameter bar	KG	1000			
2.71	8mm diameter bar	KG	2500			
	KIZINGITINI SEAWALL (GABION SEAWALL REPAIR)					
2.72	Clear site of all obstacles and debris and dispose as directed by the Engineer on site.	SM	2550			
2.73	Rake off loose concrete on seawall to expose gabion mesh and dispose as directed by the Engineer	SM	2125			
2.74	Stone pitch exposed gabion seawall with coral boulders max. size 150mm with 1:3 cement/sand mortar.	SM	2125			
2.75	Apply 20mm thick plaster to exposed gabion mesh (mix 1:1:3 - cement/lime/sand)	SM	2125			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL NO. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	Paving walkway slab					
2.76	Break/remove loose concrete pavement slab and dispose as directed by the Engineer.	SM	1700			
2.77	Cast in-situ 100mm pavement slab concrete class 25/20, sloping 1:100 towards the sea (slabs to be in lengths of 2m cast alternately & divided by 100x25mm planed timber strips	SM	1700			
2.78	Provide sawn and planed cypress timber 100x25mm in strips of 1.5m and place them on alternate concrete slabs in 2/77 above to form the false cracks	LM	860			
2.79	Repair water drain points (concrete mix 25/20) as directed by the Engineer	CM	10			
2.80	Repair staircases/steps (concrete mix 25/20) as directed by the Engineer	CM	5			
2.81	Cast in-situ 200mm thick by 500mm high wave screen beam class 25/20, (in lengths of 2.0m cast alternately)	CM	160			
	KIZINGITINI SEAWALL (Seawall next to Kizingitini Secondary School)					
2.82	Set out works over land and water.	LM	15			
2.83	Excavate top soil to remove sea vegetation to a depth n.e 500 m and dispose as directed by the Engineer.	CM	30			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.84	Excavate in water - logged loose sand to a depth not exceeding 1.5m for construction of seawall foundation (rate to include cost of keeping sides of trenches vertical)	CM	80			
2.85	Provide gunny bags and fill them with a mixture of cement and sand, mix ratio 1:6 and place them in position. (Selected boulders may act as replacement)	CM	80			
2.86	Cast in-situ 1500x500 mass concrete footing using OPC class 25/20 (1:1 1/2:3)	CM	20			
2.87	Construct a 200mm thick concrete block wall sloping at 2:1, average height 2m with concrete block piers at 3m c/c as shown on the drawings. (Rate to include cost of making concrete blocks to class A1, stepping and pointing of wall joints)	SM	80			
2.88	Provide weep-holes on the wall using 100mm diameter UPVC pipes	No.	40			
2.89	Construct a stone pitch layer behind the sloping block wall, with weep-holes running through them - Minimum thickness to be 300mm.	SM	70			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.90	Provide and place behind stone-pitch layer approved filter cloth as ployfelt TS 1000 or equivalent, held in position at the top and bottom by 50mm mangrove poles. (Rate to include cost of stitching the consecutive pieces of filter cloth together - overlap to be 300mm diameter)	SM	100			
2.91	Provide and consolidate in layers of 300mm sand fill behind the seawall and other areas as directed by the Engineer.	CM	300			
2.92	Cast in situ a 200mm thick x 500mm high wave screen beam class 25/20 (lengths of 2m cast alternatively).	CM	45			
2.93	Provide and arrange coral stone boulders on the toe.	CM	360			
2.94	Plaster the wave screen beam all round.	SM	450			
2.95	Demolish the failed section and cart-away the debris of the collapsed pavement as directed by the Engineer.	CM	90			
2.96	Excavate for 450 x 200mm concrete strip footing.	CM	30			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.97	PAVEMENT Provide selected boulders (300mm thick) and place them firmly in position.	CM	10			
2.98	cast in situ a strip footing, 450x200mm of mass concrete class 25/20, 1200mm below the finished sand backfill level.	CM	3			
2.99	Construct a concrete block wall, 200mm thick to carry pavement slab (Rate to include cost of making the concrete blocks)	SM	20			
2.100	Provide and place approved Hardcore, compacting it adequately in two layers between the stone pitch layer and the pavement wall thickness 300mm.	CM	10			
2.101	Provide and place approved murrum blinding, 50mm thick to receive the pavement concrete.	SM	40			
2.102	Provide and place worth shutters to side of paved walkway.	SM	15			
2.103	Provide sawn and planed cypress timber 100 x 25mm in steps of 1.5m and place them on alternate concrete slabs to form false cracks.	LM	40			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
2.104	Cast in situ 100mm pavement slab class 25/20, slopping 1:100 towards the sea (slabs to be in lengths of 2.0m cast alternately, so that false cracks develop, between adjacent slabs).	SM	550			
2.105	Provide, spread and compact murram, 150mm thick, on the sand backfill next to the pavement slab.	SM	1650			
	<u>Drainage channels and culvert.</u>					
2.106	Provide materials and carry out repairs for making good the existing open drains as directed by Engineer.	LM	55			
2.107	Provide materials and carry out repairs for making good the existing culverts as directed by Engineer.	LM	55			
2.108	Construct open drains as directed by Engineer.	LM	65			
2.109	Provide, excavate, lay, joint/construct precast concrete 450mm culverts.	LM	30			
	<u>Staircase</u>					
2.110	Provide and place wrot shutter for staircases.	SM	10			
2.111	Provide materials and construct 3No. Class 25/20 concrete staircase as directed by the Engineer.	CM	22			
2.112	Allow for construction of purpose made R.C mooring bollards and place at points as directed by the Engineer.	CM	4			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	BOAT SLIPWAY RAMP					
2.113	Cast in-situ class 25/20 mass concrete boat slipways ramp.	CM	15			
	<u>Repiar of worn-out sea wall</u>					
2.114	Chase and hack out vertical and horizontal Block wall cracks, eroded surface clean and use 1:3 cement: sand mortar and plaster to fill cracks and repair surface.	SM	500			
2.115	Apply 20mm thick plaster to eroded surface of concrete masonry wall and wave screen beam (mix 1:1:3 - cement/lime/sand)	SM	1500			
CARRIED TO COLLECTION ON PAGE 99						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL No. 2: CONCRETE WORKS**

	DESCRIPTION	AMOUNT	
		KSHS.	CTS.
	COLLECTION		
	Total Carried from Page 83.....		
	Total Carried from Page 84.....		
	Total Carried from Page 85.....		
	Total Carried from Page 86.....		
	Total Carried from Page 87.....		
	Total Carried from Page 88.....		
	Total Carried from Page 89.....		
	Total Carried from Page 90.....		
	Total Carried from Page 91.....		
	Total Carried from Page 92.....		
	Total Carried from Page 93.....		
	Total Carried from Page 94.....		
	Total Carried from Page 95.....		
	Total Carried from Page 96.....		
	Total Carried from Page 97.....		
	Total Carried from Page 98.....		
	TOTAL CARRIED TO GRAND SUMMARY ON PAGE 104		

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL NO. 3: DAYWORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<p><u>ALL BILL IS PROVISIONAL</u></p> <p><u>SCHEDULE OF DAYWORKS RATES- PLANTS AND EQUIPMENT</u></p> <p>The rates inserted herein are to include all operational and maintenance costs, fuel, oil, grease, drivers, turnboys, wages, supervision, overheads and profits. Only time employed on the work will be paid for.</p>					
3.01	Concrete mixer	Hrs	20			
3.02	Concrete vibrating poker type	Hrs	20			
3.03	1CM self – propelling concrete dumper	Hrs	30			
3.04	50mm delivery pump and motor	Hrs.	20			
3.05	Diesel Engine boat	Hrs	20			
3.06	Wheel Excavator with a front – loading shovel as caterpillar 428	Hrs	20			
3.07	50T Pontoon or Barge	Hrs	20			
	SUB TOTAL					
	Allow a % of Sub Total above for all operational and maintenance costs, fuel, oil, grease, drivers, turnboys, wages, supervision, overheads and profits.	%				
CARRIED TO COLLECTION ON PAGE 103						

MoLPWH&UD - STRUCTURAL DEPARTMENT

PROJECT: COMPLETION OF NDAU SEAWALL
BILL NO. 3: DAYWORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<u>SCHEDULE OF DAYWORKS RATES- LABOUR</u> The rates inserted herein are to include all costs of labour such as insurance, accommodation, traveling, time, overtime, use and maintenance of small tools of trade, supervision, overheads and profits. Only actual time engaged upon the work will be paid for.					
3.08	Unskilled labour	Hrs.	20			
3.09	Artisan	Hrs.	20			
3.10	Plant Operator	Hrs.	20			
3.11	Steel Fixer and Bender	Hrs.	20			
3.12	Steel Erector	Hrs.	20			
3.13	Drilling Rig Operator	Hrs.	20			
	SUB TOTAL					
	Allow a % of Sub Total above for all operational and maintenance costs, fuel, oil, grease, drivers, turnboys, wages, supervision, overheads and profits.	%				
CARRIED TO COLLECTION ON PAGE 103						

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****BILL NO. 3: DAYWORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				KSHS	KSHS	CTS
	<u>SCHEDULE OF DAYWORKS</u> <u>RATES- MATERIALS</u> All materials to comply with the specifications. The rates inserted herein are to include delivery to the site, handling, overheads and profits					
3.14	Ordinary Portland cement	Kg	1000			
3.15	Fine aggregate for concrete	CM	10			
3.16	Course aggregate for Concrete	CM	10			
3.17	Timber for Shuttering	SM	25			
3.18	Polyfelt TS 1000	SM	25			
3.19	High yield Steel any diameter	Kg	200			
3.20	Concrete Block Class A1.	SM	100			
3.21	Hardcore any size	CM	100			
3.22	Gunny bags	No.	500			
3.23	Gabion boxes	CM	100			
3.24	Coral Stone Boulders	CM	100			
	SUB TOTAL					
	Allow a % of Sub Total above for all operational and maintenance costs, fuel, oil, grease, drivers, turnboys, wages, supervision, overheads and profits.	%				
CARRIED TO COLLECTION ON PAGE 103						

BILL No. 3: DAYWORKS

	DESCRIPTION	AMOUNT	
		KSHS.	CTS.
	Total Carried from Page 100.....		
	Total Carried from Page 101.....		
	Total Carried from Page 102.....		
TOTAL CARRIED TO GRAND SUMMARY ON PAGE 104.....			

MoLPWH&UD - STRUCTURAL DEPARTMENT**PROJECT: COMPLETION OF NDAU SEAWALL****GRAND SUMMARY**

	DESCRIPTION	AMOUNT	
		KSHS.	CTS.
	<u>SUMMARY</u>		
	BILL NO. 1: CARRIED FROM PAGE 82		
	BILL NO. 2: CARRIED FROM PAGE 99		
	BILL NO. 3: CARRIED FROM PAGE 103		
	SUB – TOTAL 1		
	Add 10% of sub-total for contingencies		
	SUB – TOTAL 2		
	Add: 5% of sub-total for price fluctuations...		
	GRAND TOTAL CARRIED TO FORM OF TENDER		
	CONTRACTOR'S NAME		
	ADDRESS:		
	SIGNATURE:		
	DATE:		
	WITNESS NAME		
	ADDRESS:		
	SIGNATURE:		
DATE:			

SECTION VI - SPECIFICATIONS

[In drafting of the Specification, care must be taken when drafting the Work's Requirements to ensure that the requirements are not restrictive. Recognized international standards should be used as much as possible for the description of goods, materials and workmanship. Where other particular standards are specified, whether national standards or other standards, it should be stated that goods, materials and workmanship meeting other authoritative standards and which promise to ensure equal or higher quality than the standards specified, will also be acceptable. Where a brand name of a product is specified it should always be qualified with the terms "or equivalent".]

Notes for preparing Specifications

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

SECTION A

GENERAL

01. DESCRIPTION OF WORKS

1. Scope

The scope involves completion works for Ndau seawall, Extension of Kizingitini seawall and repair of seawalls in both Ndau and Kizingitini Islands in Lamu County.

The main items of work consist of the following:

- Construction of Ndau seawall.
- Extension of Kizingitini seawall.
- Repair of Kizingitini and Ndau seawalls.
- Filling up with approved materials behind the seawalls to make up levels.
- Construction of concrete paved walkways, staircases, mooring bollards and boat slipways along the seawall.

1. Location

The works are located in Ndau village and Kizingitini village. These villages are on two separate Islands of Lamu County.

- (a) The contractor shall visit the sites to acquaint himself/herself with the topography, soil condition, access, source of construction materials and reliability of water source, water tides, 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.
- (b) The sites can be accessed by road via Malindi to Mokowe in Lamu or by air through Manda Airport in Lamu County. Either way one will use a boat to travel to Ndau and Kizingitini. It takes about one and a half hours to reach Kizingitini from Lamu by speedboat and a further fifteen minutes to get to Ndau village from Kizingitini.

2. The Resident Engineer's House.

The Contractor shall rent a suitable two bed roomed house in Ndau village.

3. 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.

4. Site Office

The contractor shall be required to provide and maintain a site office for the project manager and his team together with all standard furniture fittings. The contractor shall be responsible for paying all connections, rent and call charges in connection therewith.

5. Labour camp

The contractor may be 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.

02 THE MANAGEMENT OF THE CONTRACT

- 1. The Chief Engineer (Structural) of the State Department of Public Works will be responsible for the contract management and site supervision.

2. All materials and workmanship shall comply with the latest edition of the Ministry of Public Works specifications for Civil Engineering.

03 EXTENT OF CONTRACT AND ALTERATION OF DESIGN

1. 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.
2. 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.
3. 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.
4. 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.

04 PROGRAMME FOR EXECUTION OF THE WORKS

1. In accordance with the terms of Clause 8.3 of the General Conditions of the Contract, the Contractor shall submit to the Engineer within 28 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
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

8. 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.

05 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.

06 SITE PERSONNEL

1. 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.
2. 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.
3. The Site Agent to be an experienced technician who is a Diploma holder in Civil/Structural Engineering.
4. The Contractor shall keep constantly literate English speaking Agent 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.

07 NOTICE OF OPERATIONS

1. 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.
2. 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.
3. 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.

08 SETTING OUT

1. 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.
2. 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.
3. All approved setting out points, lines, stations etc shall be marked by concrete markers and steel pegs or as otherwise approved by the Engineer.
4. 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.

09. HEALTH, SAFETY ON SITE AND WELFARE

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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 duration of contract a fully equipped dispensary. This shall be with a qualified Clinical Officer/Nurse 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 and be responsible for all site welfare arrangements at his own cost.

10 PRIVATELY OWNED AND PUBLIC UTILITY SERVICES

1. The Contractor shall make himself 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.
2. 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.

3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

11. EXISTING ROADS AND ACCESSES

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.

12 COMPLIANCE WITH STATUTES AND REGULATIONS

1. 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.
2. 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.
3. 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.

4. 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.

13. SUNKEN AND FLOATING PLANT

1. If any pontoon, barge or boat in use or in possession of the Contractor or by the person employed by him shall be sunk, stranded or become derelict from any cause, the Contractor shall raise and remove the same as soon as possible and in *any* case before the end of the contract period.
2. If the Contractor shall fail to remove any sunken plant as aforesaid within such reasonable time after completion of the works as may be allowed by the Engineer the Employer shall remove such plant and the expenses shall be a debt due from the Contractor to the Employer
3. The Contractor shall employ adequate watchmen on all floating plant and shall provide and display good and sufficient lighting as may be necessary between the hours of sunset and sunrise.

14. WATER SUPPLY

1. 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.
2. 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.
3. 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.

15. LIGHTING, POWER AND TELEPHONE

1. 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.
2. 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.

16. WORKING AREA

1. 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.

2. 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.
3. 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 there from. 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.

17. CO-ORDINATION OF THE WORKS

1. 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.
2. 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.
3. 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.
4. 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.

18. COPIES OF ORDERS AND TEST CERTIFICATES

1. 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.
2. The Contractor shall deposit with the Engineer samples of materials and manufactured articles including the manufacturer's specification, when and where appropriate.
3. 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.
4. 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.
5. 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.

19. PROGRESS PHOTOGRAPHS AND RECORD DRAWINGS

1. Digital photographs showing the progress of the works shall be taken every month by the Contractor. The Contractor shall produce 2No. Sets of selected colour prints size (150mm x 100mm) which shall be handed over to the Engineer together with all the soft copies. Each photograph shall be marked giving location and date when taken and a brief description or title.
2. The photographs shall be mounted on A4 loose-leaf sheets, minimum 200g, with transparent plastic sheets.
3. 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
4. All drawings shall be A1 in size to the ink border and drawn on a tracing paper.

20. SURVEY EQUIPMENT FOR THE ENGINEER

1. The Contractor will make available the following survey equipment for use by the Engineer for the duration of the Contract. The survey equipment will be new and in proper adjustment to the satisfaction of the Engineer.
 - 1 No. Wild NK2 theodolite or equivalent with tripod
 - 1 No. 50m metric steel tape
 - 1 No. 30m metric linen or plastic tape
 - 1 No. 3m metric steel tape
 - 5 No. Ranging rods
 - 1 No. Engineer's automatic level, Wild NA2 or equivalent
2. A supply of wooden pegs, steel survey pins, hammer and other surveying accessories.
3. The Contractor will maintain the equipment and replace items as necessary all to the satisfaction of the Engineer and for the entire duration of the Contract.
4. The equipment will be deemed to be the property of the Employer during the Contract and will revert to the Contractor, if provision is not made in the appropriate item in the Bills of quantities for the equipment to revert to the Employer.
5. The Contractor will provide two experienced chainmen for the assistance of the Engineer in checking the setting out of the works.

21. ENGINEER'S SITE OFFICE AND EQUIPMENT

1. The Contractor shall provide and erect the site office for the Engineer together with all the furnishings and fittings within 42 days of the Contractor's possession of the site.
2. The office shall be of a design and construction, approved by the Engineer, and shall be constructed of concrete blocks class A1 (crushing strength 7N/mm²), 200mm wide with concrete foundation, floor slab and reinforced concrete ring beam. The roof covering shall be of gauge 26 IT4 pre-painted iron sheets from Galsheet or similar approved manufacturer. The office shall be constructed and equipped in accordance with the attached drawings and schedules.
3. The contractor shall arrange for the installation of electricity supply to the Engineer's office and shall pay all fees and obtain all permits in connection therewith. The Contractor shall allow in his prices for such installation and for the installation of electrical lights and 15 Amp plug points in each room, security lights in the yard, plug

points for kettle and 100-watt hot place. A supply of drinkable water and waterborne sanitation connected to a conservancy tank of adequate size shall be provided and maintained.

4. The contractor shall arrange for the provision of a telephone (ad any necessary extensions) with suitable privacy for conservation, for the exclusive use of the Engineer and his staff by means of a separate connection to the telephone exchange. The Contractor shall include in the item for maintenance of the office for the charges for telephone services.
5. The Engineer's office shall be separate from the Contractor's yard and shall be situated in a compound size 40 x 20m fenced with a 1.5m high chain link fence on cedar posts, complete with a gate and a padlock. Hardstanding sand access drives (not exceeding 40% of the area of the compound) shall be provided within the compound and constructed of murram or other stable road making materials. The area so provided shall be shaped to falls to provide adequate drainage and incidental kerbing and outfall drainage shall be provided where necessary. A lean-to corrugated iron shelter shall be provided for 3 cars.
6. Should the need arise to increase or decrease the floor area of the offices, then a cost adjustment (upwards or downwards) will be made to compensate for the increase or decrease in size of the offices. The will be made under the appropriate item in the bill of quantities and shall be calculated on a pro rata floor area basis.
7. No interim payment certificate will be issued until the Engineer's office and laboratory have been accepted by the Engineer as finished and able to function efficiently. Should the Contractor fail to hand over the houses, offices or laboratories within the period specified, the Engineer will make such alternative arrangements as he considers necessary. These arrangements may include the use of rented accommodation or the hire of a caravan, etc. The contractor will be responsible for all costs of such temporary arrangements made by the Engineer, including that of additional transport.
8. The office, equipment and furniture as detailed in the schedules shall remain Government property after the completion of the works and after the maintenance period, unless otherwise specified. The Contractor's rates and prices entered in the bill will be held to cover for this contingency and no claims for additional cost associated thereby will be entertained.
9. The Contractor shall be paid 100% of the cost of providing, furnishing and equipping the Engineers office, when the office shave been erected, furnished and equipped.

22. MAINTENANCE AND INSURANCE OF BUILDINGS

1. 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.
2. 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.
3. 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.
4. 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.

23. ATTENDANCE ON ENGINEER AND STAFF

1. 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. This shall include the provision of messengers and tea-lady cum cleaner. 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.
2. The Contractor shall provide a continuous supply; of soap, towels and toilet paper, coffee, tea, sugar and milk and cleaning equipment.
3. Attendance on Engineer and Staff
 - 1 No. Resident Engineer
 - 1 No. Tea Lady cum Cleaner
 - 2 No. Messengers (1 No. to be stationed at the Engineer's office - Headquarters)
4. 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 a full-time attending permanent watchman.
5. The Contractor shall include all the costs of complying with this Clause in the item for maintenance of Engineer's office and house in the Bill of Quantities.

24. RENT AND ACCOMMODATION

1. The Contractor shall provide a furnished accommodation for the Resident Engineer and his staff. The R.E's house shall have a minimum of two bedrooms and be approved by the Engineer and shall comply with all the requirements as directed by the Engineer.
2. The contractor shall arrange for the provision of a telephone and any necessary extension for the exclusive use of the Engineer and his staff by means of a separate connection to the telephone exchange. The Contractor shall include in the item for maintenance of housing accommodation all costs for the telephone services.
3. All the costs in connection with the supply, consumption and maintenance of water supply and electrical power shall be borne by the Contractor and included in the item for maintenance of housing accommodation.
4. In all cases where gas or kerosene appliances are provided, the Contractor shall be responsible for purchasing refill gas cylinders and kerosene and supplying them at the houses as required.
5. The furniture in the house shall have a minimum of furnishings as detailed in the attached schedule all to the approval of the Engineer.

25. PROVISION OF VEHICLE FOR THE ENGINEER

1. The Contractor shall provide new vehicles for the exclusive use of the Engineer and his staff. The type and make of the vehicles is as specified in Bill No.1 of the Bills of Quantities.
2. Payment for maintenance shall include provision of fuels, lubricants and tyres, all regular maintenance,

minor and major repairs including those occasioned by accidental damage from whatever cause.

3. The Contractor shall provide licensed drivers for the exclusive use of the Engineer. Thereafter the Contractor shall for the duration of the contract or after such other period as directed, maintain these vehicles. The drivers shall be available at all times during normal working hours and when specifically required by the Engineer outside these hours. The quantity of vehicles will be as specified in the General Items of the Bills of Quantities.
4. The Contractor shall ensure that all the vehicles are registered, licensed, comprehensively insured all times, serviced and maintained in good condition to the satisfaction of the Engineer so that the Resident Engineer shall at all times have all vehicles available for use in good serviceable condition.
5. In the event of any vehicle being unserviceable for whatever reason, the Contractor shall provide an alternative vehicle of the same model at his own cost.
6. The Contractor shall at completion take the vehicles to an approved Agent for testing. The Agent shall recommend to the Engineer what repairs in addition to ordinary service, are required to be carried out on the vehicles. The vehicles shall be repaired as recommended by the Agent and a certificate of roadworthiness and satisfactory, mechanical condition be obtained before the vehicles are handed over to the Employer. The Contractor shall include all the costs of complying with this sub-clause in the item for extra over for vehicle to revert to the Government.

26. PROVISION OF SPEEDBOAT

The Contractor shall hire a Speedboat for the exclusive use of the Engineer and his staff. The type and make of the speedboat is as specified in Bill No.1 of the Bills of Quantities.

27. NOISE AND DISTURBANCE

All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbances created while or in carrying out the work and from and against all claims demands proceedings damages costs charges and expenses whatsoever in regard or in relation to such liability.

28. SIGNBOARDS

The Contractor to provide Signboards to the project.

29. SITE MEETINGS

The Contractor to provide for inspections and site meetings to be held on site twice a month and where the Contractor would be expected to attend.

SCHEDULE I**ENGINEER'S OFFICE FURNITURE**

ITEM	DESCRIPTION	QUANTITY
1.	Office desk double pedestal as Mecal	2 No.
2.	Office Chairs with arm rests as Mecal	3 No.
3.	Metal filing cabinet - 4 drawers	1 No.
4.	Laptop computer (for the Resident Engineer)	1 No.
5.	Printer, UPS and extension cable	1No.

SCHEDULE II**RESIDENT ENGINEER'S HOUSE FURNITURE**

ITEM	DESCRIPTION	QUANTITY
1.	Dining table to sit six people	1 No.
2.	Dining Chairs	6 No.
3.	Coffee Table	1 No.
4.	Sofa Set	1 No.
5.	Single bed complete with high density foam mattress	2 No.
6.	Gas Cooker- 2 burner with cylinder	1 No.
7.	Refrigerator (8 cubic feet capacity)	1 No.

NOTE:

Items on schedule I to return to the Government.

Items on schedule II to return to the Contractor.

SECTION B

MATERIAL SPECIFICATIONS

200 CONCRETE WORKS

201. DEFINITIONS

1. Structural concrete is any class of concrete, which is used in reinforced concrete, prestressed or unreinforced concrete construction, which is subject to stress.
2. Non structural 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.
3. 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.
4. Moderate exposure shall refer to surfaces exposed from severe rain, buried concrete or concrete continuously under water.
5. Intermediate exposure shall refer to surfaces exposed to driving rain, alternate wetting and drying, traffic, corrosive fumes, and heavy condensation.
6. 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.
7. '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.
8. 'False work' or 'centering' shall consist of furnishing, placing and removal of all temporary construction such as framing, props, struts and piles required for the support of forms.
9. A pour refers to the operation of placing concrete into any mould, bay or formwork, etc., and also to the volume which has to be filled. Pours in vertical succession are referred to as lifts.

201a CEMENT

1. Ordinary and Rapid Hardening Portland Cement shall be sampled and tested in accordance with and shall comply with all the requirements of Kenya Standard KS02-21.
2. The weight of magnesium oxide in the cement shall not exceed 5% and the content of total sulphur expressed as SO₃, shall not exceed 3.5%.
3. The minimum compressive strength of 3 mortar cubes shall be as follows :-

Table 201a-1

Type of Cement	Strength at 3 days N/mm ²	Strength at 7 days N/mm ²	Strength at 28 days N/mm ²
Ordinary Portland Cement	17.5		38.0
Rapid Hardening Cement	23.0	31.0	46.0

4. 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.
5. 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 so constructed that no moisture rises through it

6. Each delivery of cement in bags shall be stacked together in one place. The bags shall be closely stacked so 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 bags shall exceed 3m in height. Different types of cement in bags shall be clearly distinguished by visible markings and shall be stored in separate stacks.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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 Roads & Public Works or at the Kenya Bureau of Standard at the rate of one set of tests for every 200 tonnes and at monthly intervals thereafter.

201b FINE AGGREGATE

1. 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.
2. 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.
3. 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.
4. 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 201 d.
5. Sulphate soluble in a 10 per cent solution by weight of hydrochloric acid shall not exceed 0.4 per cent by weight expressed as SO_3 , Subject also to the further restriction given on total sulphate content in Clause 201 d.
6. 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.

201c ADMIXTURES TO CONCRETE MIXES

1. 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.
2. 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.

3. 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.
4. 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%.
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.
6. Any type of admixture shall be uniform in properties throughout its use in the works. Should it be found that the admixtures as furnished are not uniform in properties; its use shall be discontinued.
7. 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 201c-1 within the range of air contents shown:

Table 201c-1

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

8. When an air entraining agent is used, the air content shall in no case exceed 6% by volume in the freshly mixed concrete.
9. 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.
10. 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%.
11. 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.

201d COARSE AGGREGATE

1. 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.
2. 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 201d-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

3. The single sized aggregate shall be combined in proportions to give overall grading of coarse aggregate within the limits set out in Table 201d-2 as follows:-

Table 201d-2

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

4. The proportion of clay, silt and other impurities passing a 75micron sieve shall be not more than one per cent by weight.
5. The content of hollow and flat shells shall not be such as will adversely affect the concrete quality when tested as set out in BS 1881. The total shell content shall not be more than the following:
- 40mm nominal size and above 2% of dry weight
 - 20mm nominal size 5% of dry weight
 - 10mm nominal size 15% of dry weight
6. Soundness: After 5 cycles of the test in AASHTO T104 the aggregate shall not show a weight loss of more than 12 per cent.
7. 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.
8. 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.
9. Impact value shall not be more than 45 per cent when tested in accordance with KS02-1238 and the ten per cent fines shall not be less than 50kN.
10. 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.

11. The aggregate shall not have water absorption of more than 2.5 per cent when tested as set out in KS 02-1238. Aggregate Crushing Value not exceeding 35% and Los Angeles Abrasion (LAA) not exceeding 50%.
12. 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.
13. Sulphate soluble in a 10 per cent solution by weight of hydrochloric acid shall not exceed 0.4 per cent by weight expressed as SO_3 , provided that the total sulphate content expressed as SO_3 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.
14. 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.

201e TESTING OF AGGREGATE

1. 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.
2. Tests to determine compliance of the aggregates with the requirements of Clauses 201c and 201d 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.
3. A material shall be accepted if not less than three consecutive sets of test results show compliance with the specification.
4. 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.
5. 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.
6. 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.
7. 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.

201f. STORAGE OF AGGREGATES

1. Aggregates shall be delivered to site in clean and suitable vehicles. Different types or sizes of aggregate shall not be delivered in one vehicle.
2. Each type of 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.
3. The storage of aggregates shall be arranged so that as far as possible rapid drying out in hot weather is prevented in orders 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.

201g . WATER FOR CONCRETE

1. Seawater or brackish water containing more than 1000ppm chloride ion or 2000ppm sulphate iron shall not be used for mixing or curing concrete.
2. Water shall be clean and free from harmful matter and shall comply with the requirements of BS3148.
3. The Contractor shall carry out tests in accordance with BS 3148 to establish compliance with the Specification.

202 **CLASSIFICATION OF CONCRETE MIXES**

1. 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.

- a. Concrete Mix by proportion or prescribed mix.
 - b. Guaranteed strength concrete or designed mix.
2. 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.
 3. A 'designed mix' shall mean a concrete, where the Contractor will be responsible for selecting the mix proportions in accordance with Clause 202b 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.
 4. 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 202c. The Engineer will therefore be responsible for ensuring that the mix prescribed will provide the strength and durability required.

202a REQUIREMENTS FOR CONCRETE

1. 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.
2. 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.
3. The maximum cement content shall not exceed 500kg/m^3 or as otherwise described in the contract or directed by the Engineer. Cement contents in excess of 500kg/m^3 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/m^3 or more, measures to reduce temperature, such as selection of the cement type with slower release of heat of hydration may be considered.
4. The minimum cement content to ensure sufficient durability shall not be less than described in Table 202a-1

Table 202a-1 MINIMUM CEMENT REQUIREMENT (kg/m³)

Exposure	Nominal maximum size of aggregate (mm)								
	Plain concrete			Reinforced concrete			Pre stressed 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

5. 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.
6. The cement content given in table 202a-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.

202 b GUARANTEED STRENGTH CONCRETE (DESIGN MIXES)

1. 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 202 b.
2. 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 202 b-1 but any case not than the minimum necessary for impermeability and durability
3. The workability shall be consistent with ease of placing and proper compaction having regard to the presence of reinforcement and other obstructions.
4. The water/cement ratio shall be the minimum consistent with adequate workability, but in any case not greater than that shown in table 202 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.
5. At least six weeks before commencing placement of concrete in the permanent works trial mixes shall be prepared for each class of concrete specified.
6. 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.
7. 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.
8. 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.

9. 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.
10. The average strength of the nine cubes tested at 28 days shall be not less than the target mean strength shown in table 202 b-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%.
11. 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.
12. 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.

Table 202 b-1

CONCRETE CLASSES AND STRENGTHS

Class of concrete	Nominal Strength (N/mm ²)	Maximum nominal size aggregate (mm)	Maximum water/cement ratio		Trial mixes Target Mean Strength (N/mm ²)	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.

202 c PREScribed MIXES FOR ORDINARY STRUCTURAL CONCRETE

1. Unless otherwise specified, the concrete mix shall be as detailed in table 202 c-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.
2. 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.
3. 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 202d to satisfy himself that the mix proportions are suitable.
4. 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.
5. 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/m^3 . 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.
6. 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.
7. Prescribed mixes shall not be used as structural concrete for the construction of the footbridge, but may be used for other secondary purposes with the approval of the Engineer.

Table 202 c-1

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

8. 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.
9. 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.
10. The average strength of the nine cubes tested at 28 days shall be not less than the target mean strength shown in table 202b-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%.
11. 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.

12. 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.

202 d QUALITY CONTROL OF CONCRETE

1. 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.
2. 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.
3. 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.

Table 202 d-1 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 concrete
60 m ³	20 m ³ or 20 batches – Normal structural concrete
150 m ³	50 m ³ or 50 batches – Mass concrete

4. 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 202d.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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 1702b-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 202b-1 under the same heading.
10. When test cube results are available for at least 40 consecutive batches of any class of concrete mixed in anyone plant, compliance with the specified characteristic strength will be assumed, if the following requirements are met:
 - (a) 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'.

- (b) Each individual test result is greater than 85% of the specified characteristic strength.
11. 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/mm^2 for grade 15 or 7.5N/mm^2 for grade 20 or above.
 12. If anyone 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.
 13. 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.
 14. 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.
 15. 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.
 16. 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.

203 MEASURING MATERIALS FOR CONCRETE

1. The Contractor shall provide adequate supervision to ensure that, the required standard in control of materials and workmanship are maintained.
2. 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
3. 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.
4. 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.
5. 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.
6. The quantities of cement, sand and the various sizes of coarse aggregate shall be measured by weight, unless otherwise authorized by the Engineer.
7. 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.
8. 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.
9. 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.
10. 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.

11. 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.
12. 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.
13. 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.

204 READY MIXED CONCRETE

1. 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.
2. 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.
3. 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.
4. 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 manufacturers guaranteed capacity of the drum, and the speed of the rotation of mixing drum or blades.
5. 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.

205 MIXING OF CONCRETE

1. 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 206.
2. Concrete mixers may be of the revolving drum or the revolving blade type and the mixing 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.
3. 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 30°C .
4. 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.

5. 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.
6. 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 dispositioning 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.
7. 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.
8. Concrete shall be mixed in such quantities that any batch can be placed in the works within 30 minutes. The re-tampering 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.
9. 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.
10. 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.
11. Concrete shall be mixed in such quantities that any batch can be placed in the works within 30 minutes. The re-tampering 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.
12. 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.

206 MIXING OF CONCRETE BY HAND

1. 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.
2. The mixing shall be done on a clean watertight, non-absorbent platform approved 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.
3. Mixing shall be carried out until the whole batch has been turned at least three times dry and three times wet.
 4. For hand mixing the cement content shall be increased by 10% over that required for machine mixing.
5. 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.

207 TRANSPORT OF CONCRETE

1. 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.

2. 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.
3. Chuting shall be approved by the Engineer before use and shall not exceed a 45 degree slope. It is to be clean 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.
4. 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.
5. In no case shall more than 30 minutes elapse between mixing and placing of any batch of concrete in its final position.

208 PLACING OF CONCRETE

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

10. 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.

209 PLACING OF CONCRETE UNDER WATER

1. 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.
2. 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 plasticizer with high percentage of fines should be used to obtain plastic mix. The slump of the concrete should be not less than 25mm.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

210 COMPACTION OF CONCRETE

1. 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.
2. 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.
3. 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 concrete which has not yet hardened sufficiently.

4. 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.

211 CURING OF CONCRETE

1. 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.
2. 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.
3. 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.
4. 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 dean water. On no account must the surrounding sacks, hessian, etc. be allowed to dry during the curing period.
5. 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.
6. The curing compound shall be delivered to the work in ready mixed from. 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.
7. 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.
8. 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, peal 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.
9. 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.
10. 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.
11. 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 inorder to comply with this requirement a layer may be started before completion of the preceding layer.
12. 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.

13. 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.
14. 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.
15. 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.
16. 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 .
17. 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.
18. 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.

212 FINISHES ON UNFORMED SURFACES

1. Horizontal or nearly horizontal surfaces which are not cast against formwork shall be finished to the class shown on the drawings and defined hereunder.
2. 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 plain surface. Surplus concrete being stuck off by the straight edge immediately after compaction.
3. 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.
4. Class UF3 finish

This is a hard trowelled surfaced 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.
5. Surface tolerance for unformed concrete shall be as shown on table 212- 1. Where dimensional tolerances are given on the drawing they shall take precedence.

Table 212-1 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	10mm	+20-10mm
UF 2	Nil	10mm	+20-10mm
UF 3	Nil	5mm	12.5 of -7.5mm

213 CEMENT MORTAR

1. Mortar shall be composed of fine aggregate complying with Clause 203c 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
2. 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 anycase the water/cement ratio shall not be more than 0.5.
3. 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.
4. 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.

214 CONCRETE FOR SECONDARY PURPOSES

1. Nonstructural concrete shall be composed of ordinary Portland cement complying with KS 02-21 and aggregates complying with KS 02-95 including all-in aggregate thin 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.
2. 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.
3. 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.

215 CONSTRUCTION JOINTS

1. 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 property compacted.
2. 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

3. 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.
4. 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.
5. 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.
 6. Construction joints formed as free surfaces shall not exceed a slope of 20% from the horizontal.
7. 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.
8. Where concrete has become too hard for the above treatment to be successful, the surface whether formed or free is to be thoroughly scrubbed by mechanical means or wet sand blasted and then washed with clean water. The indentations produced by scrubbing shall be not less than 10mm deep and shall not extend closer than 40mm to a finished face.
9. 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 204 b.
10. 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.
11. 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.

216 EXPANSION JOINTS

1. 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.
2. 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.
3. 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.
4. 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 half of the joint is being set other half shall be completely free from longitudinal restraint.
5. 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.

217 EXPANDED RUBBER SEALANTS

1. The materials shall comply in 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
2. 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.
 3. The installation shall be carried out early in the morning with the ambient temperature of the structure being 20°C.
 4. The surfaces of the steelwork in contact with sealant shall be free of all organic and inorganic debris and impurities.
 5. The amount of precompression shall be agreed with the Engineer on site.
 6. 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.

218 JOINT SEALING COMPOUND

1. Poured joint sealing compound shall consist of hot or cold poured material as agreed with the Engineer on site.
2. 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.

<u>Test</u>	<u>Requirements</u>
Cone penetrating-150g for 5 seconds at cone. Not more than 27.5mm.	Penetration to be not less than 5mm 25°C. Standard grease
Flow on a plane inclined at 75° to Horizontal, 5 hours at 60°C	Flow not to exceed 20mm.
Bond 25mm wide joint extended	Not more than one specimen in 3 to 12.5mm per hour at 3 cycles of Develop a crack, separation or other extension and compression opening more than 6mm deep.
3. 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 cold poured joint sealing compounds.	
4. The treatment of the surfaces to receive sealant shall be carried out strictly with the suppliers' instructions.	
5. 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.	
6. 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.	

218 **JOINT FILLER**

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

- c) Neoprene
 - d) Or similar approved material
2. 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.

219 CEMENT GROUT

1. 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,
2. 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.
3. 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.

220 FORMWORK FOR STRUCTURES

1. 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 sum 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.
2. Falsework 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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 damps 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.
8. 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.

9. 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.
10. 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.
11. 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.
12. 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.
13. 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 214-1. 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.
14. Formworks 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.
15. 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.
16. 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.
17. 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.
18. All formwork shall be approved by the Engineer before concrete is placed within it. The Contractor shall, if required by the Engineer, provide the latter 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.
19. Formwork shall be measured by the square metre of formwork actually in 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.
20. 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.
21. 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
22. 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.

221 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.

Table 222-1 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.

3. 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.
4. 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.
5. 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.
6. 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.

7. 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.
8. 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.
9. 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.
10. 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.

222 FINISHES ON FORMED SURFACES

1. 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.

2. 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.

3. 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.

4. All parts of formwork concrete surface shall be in the positions shown on the drawings within the tolerances set out in table 223-1. In cases where the drawings call for tolerances other than those given in the table the drawings shall rule.

Table 223-1 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 110

- 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.

223 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 the receipt 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 back 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 223-1 shall be ground down 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.

224 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.

3. 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.

225 BENDING AND FIXING REINFORCEMENT

1. Unless otherwise shown on the drawings, bending and cutting shall comply with BS 4466.
2. The Contractor shall satisfy himself as to the accuracy of any bar bending schedules supplied and shall be responsible for cuffing, bending and fixing the reinforcement in accordance with the drawings.
3. 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.
4. After bending, bars shall be securely tied together in bundles or groups and legibly labeled as set out in BS 4466.
5. Reinforcement shall be thoroughly cleaned and all dirt, scale, loose rust, oil and other contaminants removed before it is placed in the works.
6. 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.
7. 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.
8. 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 .6mm diameter soft annealed iron.

Alternatively, another type of spacer block may be used subject to the Engineer's agreement.
9. 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.
10. 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.
11. 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.
12. Bars complying with BS 4461 or other high tensile bars shall not be bent after being placed in the works.
13. 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.
14. 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 or 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 be heating and bending of high yield bars be permitted.
15. 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

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

17. 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.

18. 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.

226 MEASUREMENT AND PAYMENT FOR CONCRETE

1. 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 0.10 m^3
 - b) Fillets, drips, rebates, recesses, grooves, chamfers and the like each less than 0.005 m^2 in cross-sectional area.
2. 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 over break or working space.
 - g) Complying with the requirements of this specification.
3. 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 .

227 FILTER CLOTH

The Filter Cloth shall be made of Polypropylene and shall have the following as minimum characteristics.

PROPERTY	UNITS	VALUE
1. Tensile strength ISO 103119	KN/M	16
2. Elongation at max. Tensile Strength ISO 10319	%	40
3. Puncture Resistance (CBR) ISO 12236	N	2800
4. Effective Opening size O90 Dry sieve. NBN B29001	UM	50
5. Permeability NBN 29001	(1/M ² Sec.)	100

SECTION VII - DRAWINGS

The drawings for the Proposed project can be inspected at the Chief Engineer (Structural) Boardroom, second floor, Hill Plaza during normal working hours. Two sets of the Working Drawings shall be provided to the successful Bidder but additional copies shall be provided at a cost to be determined by the Engineer.

SUPPLEMENTARY INFORMATION

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VIII - General Conditions of Contract

1. GENERAL CONDITIONS

1.1 General Provisions

1.1.1 Definitions

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

1.1.2 The Contract

“**Bills of Quantities**”, “**Daywork Schedule**” and “**Schedule of Payment Currencies**” mean the documents so named (if any) which are comprised in the Schedules.

“**Contract Agreement**” means the contract agreement referred to in Sub-Clause 1.6 [Contract Agreement].

“**Contract**” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

“**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.

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

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

“**Letter of Tender**” means the document entitled letter of tender or letter of tender, which was completed by the Contractor and includes the signed offer to the Procuring Entity for the Works.

“**SCC**” means the **Special Conditions of Contract completed by the Procuring Entity which modify the General Conditions of Contract.**

“**Schedules**” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in the Contract. Such document may include the Bills of Quantities, data, lists, and schedules of rates and/or prices.

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

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

1.1.3 Parties and Persons

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

“**Contractor's Representative**” means the person named by the Contract or in the Contractor appointed from time to time by the Contractor under Sub-Clause 4.3 [Contractor's Representative], who acts on behalf of the Contractor.

“**Contractor**” means the person(s) named as contractor in the Letter of Tender accepted by the Procuring Entity and the legal successors in title to this person(s).

“**Engineer**” means the person appointed by the Procuring Entity to act as the Engineer for the purposes of

the Contract and named in the **SCC**, or other person appointed from time to time by the Procuring Entity and notified to the Contractor under Sub-Clause 3.4 [Replacement of the Engineer].

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

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

“Procuring Entity's Personnel” means the Engineer, the assistants referred to in Sub-Clause 3.2 [Delegation by the Engineer] and all other staff, labor and other employees of the Engineer and of the Procuring Entity; and any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as Procuring Entity's Personnel.

“Procuring Entity” means the person named as Procuring Entity in the **SCC** and the legal successors in title to this person.

“Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.4 Dates, Tests, Periods and Completion

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

“Commencement Date” means the date notified under Sub-Clause 8.1 [Commencement of Works].

“Completion Certificate” means the certificate issued under Sub-Clause 11.9 [Performance Certificate]. **“Day”** means a calendar day and **“year”** means 365 days.

“Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over 365 days except if otherwise stated in the **SCC** (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [Taking Over of the Works and Sections].

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

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

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

“Time for Completion” means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [Time for Completion], as stated in the **SCC** (with any extension under Sub-Clause 8.4 [Extension of Time for Completion]), calculated from the Commencement Date.

1.1.5 Money and Payments

“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.

“Contract Price” means the price defined in Sub-Clause 14.1 [The Contract Price] and includes adjustments in accordance with the Contract.

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

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

“Final Statement” means the statement defined in Sub-Clause 14.11 [Application for Final Payment]

Certificate].

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

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

“Local Currency” means the currency of the Country.

“Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment].

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

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

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

1.1.6 Works and Goods

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

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

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

“Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

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

“Section” means a part of the Works specified in the SCC as a Section (if any).

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

“Works” mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.1.7 Other Definitions

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

“Country” means Kenya as the country in which the Site is located, where the Permanent Works are to be executed.

“Force Majeure” is defined in Clause 19 [Force Majeure].

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

“Notice of Dissatisfaction” means the notice given by either Party to the other under Sub-Clause 20.4 indicating its dissatisfaction and intention to commence arbitration.

“Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security].

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

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

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

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

12 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “written” or “inwriting” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- e) the word “tender” is synonymous with “tender” and “tenderer” with “Tenderer” and the words “tender documents” with “tendering documents.”

13 Communications

1.3.1 Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the **SCC**; and
- b) delivered, sent or transmitted to the address for the recipient's communications as stated in the **SCC**.
However:
 - i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

1.3.2 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

14 Law and Language

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

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

15 Priority of Documents

1.5.1 The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Contract Agreement,

- b) the Letter of Acceptance,
- c) the Particular Conditions–Part A,
- d) the Particular Conditions–Part B
- e) the General Conditions of Contract
- f) the Form of Tender,
- g) the Specifications and Bills of Quantities
- h) the Drawings, and
- i) the Schedules and any other documents forming part of the Contract.

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

16 Contract Agreement

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

17 Assignment

Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:

- a) May assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and
- b) may, as security in favor of a Procuring Entity or financial institution, assign its right to any moneys due, or to become due, under the Contract.

18 Care and Supply of Documents

1.8.1 The Specification and Drawings shall be in the custody and care of the Procuring Entity. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

1.8.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Procuring Entity. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer

1.8.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Procuring Entity's Personnel shall have the right of access to all these documents at all reasonable times.

1.8.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

19 Delayed Drawings or Instructions

1.9.1 The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.

If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

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

- 1.9.2 After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 1.9.3 However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

1.10 Procuring Entity's Use of Contractor's Documents

- 1.10.1 As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor. The Contractor shall be deemed (by signing the Contract) to give to the Procuring Entity a non-terminable transferable non-exclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:
- a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
 - b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
 - c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.
- 1.10.2 The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Procuring Entity for purposes other than those permitted under this Sub-Clause.

1.11 Contractor's Use of Procuring Entity's Documents

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

1.12 Confidential Details

The Contractor's and the Procuring Entity's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

1.13 Compliance with Laws

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

- a) The Procuring Entity shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or to be) obtained by the Procuring Entity; and the Procuring Entity shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and
- b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licenses and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Procuring Entity harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

1.14 Joint and Several Liability

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

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

1.15 Inspections and Audit by the Procuring Entity

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

2 THE PROCURING ENTITY

2.1 Right of Access to the Site

- 2.1.1 The Procuring Entity shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the **SCC**. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Procuring Entity is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Procuring Entity shall do so in the time and manner stated in the Specification. However, the Procuring Entity may withhold any such right or possession until the Performance Security has been received.
- 2.1.2 If no such time is stated in the **SCC**, the Procuring Entity shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].
- 2.1.3 If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Procuring Entity to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
 - a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 2.1.4 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 2.1.5 However, if and to the extent that the Procuring Entity's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

2.2 Permits, Licenses or Approvals

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

- a) Copies of the Laws of the Country which are relevant to the Contract but are not readily available, and
- b) Any permits, licenses or approvals required by the Laws of the Country:

- i) Which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],
- ii) For the delivery of Goods, including clearance through customs, and
- iii) For the export of Contractor's Equipment when it is removed from the Site.

23 Procuring Entity's Personnel

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

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

24 Procuring Entity's Financial Arrangement

24.1 The Procuring Entity shall submit, before the Commencement Date and there after within 30 days after receiving any request from the Contractor, reasonable evidence that financial arrangements have been made and are being maintained which will enable the Procuring Entity to pay the Contract Price punctually (as estimated at that time) in accordance with Clause 14 [Contract Price and Payment]. Before the Procuring Entity makes any material change to his financial arrangements, the Procuring Entity shall give notice to the Contractor with detailed particulars.

24.2 In addition, if the Procuring Entity has notified to the Contractor that the Procuring Entity has suspended disbursements under its loan, which finances in whole or in part the execution of the Works, the Procuring Entity shall give notice of such suspension to the Contractor with detailed particulars, including the date of such notification, with a copy to the 2.4.3 Engineer, within 7 days of the Procuring Entity having received the suspension notification from the Procuring Entity. If alternative funds will be available in appropriate currencies to the Procuring Entity to continue making payments to the Contractor beyond a date 60 day after the date of Procuring Entity notification of the suspension, the Procuring Entity shall provide reasonable evidence in his notice of the extent to which such funds will be available.

25 Procuring Entity's Claims

25.1 If the Procuring Entity considers itself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Procuring Entity or the shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Procuring Entity's Equipment and Free-Issue Materials], or for other services requested by the Contractor.

25.2 The notice shall be given as soon as practicable and no longer than 30 days after the Procuring Entity became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

25.3 The particulars shall specify the Clause or other basis of the claim and shall include substantiation of the amount and/or extension to which the Procuring Entity considers itself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Procuring Entity is entitled to be paid by the Contractor, and/or(ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].

3 THE ENGINEER

3.1 Engineer's Duties and Authority

3.1.1 The Procuring Entity shall appoint the Engineer who shall carry out the duties assigned to him in the Contract. The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties.

The Engineer shall have no authority to amend the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be

implied from the Contract. If the Engineer is required to obtain the approval of the Procuring Entity before exercising a specified authority, the requirements shall be as stated in the Particular Conditions. The Procuring Entity shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

- 3.12 However, whenever the Engineer exercises a specified authority for which the Procuring Entity's approval is required, then (for the purposes of the Contract) the Procuring Entity shall be deemed to have given approval. Except as otherwise stated in these Conditions:
- a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Engineer shall be deemed to act for the Procuring Entity; the Engineer has no authority to relieve either Party of any duties, obligations or
 - b) any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and
 - c) any act by the Engineer in response to a Contractor's request except as otherwise expressly specified shall be notified in writing to the Contractor within 14 days of receipt.
- 3.12 The following provisions shall apply; The Engineer shall obtain the specific approval of the Procuring Entity before taking action under the following Sub-Clauses of these Conditions:
- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost.
 - b) Sub-Clause 13.1: instructing a Variation, except;
 - i) In an emergency situation as determined by the Engineer, or
 - ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the **SCC**.
 - c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
 - d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable currencies.
- 3.13 Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Procuring Entity, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Procuring Entity.

3.2 Delegation by the Engineer

- 3.21 The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].
- 3.22 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:
- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;
 - b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

- 3.3.1 The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under this Clause. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.
- 3.3.2 The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer or a delegated assistant:
- a) Gives an oral instruction,
 - b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
 - c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation, then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).

3.4 Replacement of the Engineer

- 3.4.1 If the Procuring Entity intends to replace the Engineer, the Procuring Entity shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Engineer. If the Contractor considers the intended replacement Engineer to be unsuitable, he has the right to raise objection against him by notice to the Procuring Entity, with supporting particulars, and the Procuring Entity shall give full and fair consideration to this objection.

3.5 Determinations

- 3.5.1 Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Engineer shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.
- 3.5.2 The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars, within 30 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

4 THE CONTRACTOR

4.1 Contractor's General Obligations

- 4.1.1 The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.
- 4.1.2 The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.
- 4.1.3 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country as defined by the Procuring Entity.
- 4.1.4 The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.
- 4.1.5 The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.

- 4.16 The Contractor shall not commence any Works, including mobilization and/or pre-construction activities (e.g. limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrowpits), unless the Engineer is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts.
- 4.17 If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Particular Conditions:
- a) The Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;
 - b) These Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;
 - c) The Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and
 - d) Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and insufficient detail for the Procuring Entity to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

42 Performance Security

- 4.21 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.
- 4.22 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the **SCC** and denominated in the currency (ies) of the Contractor in a freely convertible currency acceptable to the Procuring Entity. If an amount is not stated in the **SCC**, this Sub-Clause shall not apply.
- 4.23 The Contractor shall deliver the Performance Security to the Procuring Entity within 14 days after receiving the Letter of Acceptance and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable Procuring Entity or financial institution selected by the Contractor and shall be in the form annexed to the Particular Conditions, as stipulated by the Procuring Entity in the **SCC**, or in another form approved by the Procuring Entity.
- 4.24 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.
- 4.25 The Procuring Entity shall not make a claim under the Performance Security, except for amounts to which the Procuring Entity is entitled under the Contract.
- The Procuring Entity shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Procuring Entity was not entitled to make the claim.
- 4.26 The Procuring Entity shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.
- 4.27 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a deduction to the Contract Price as a result of a change in cost and/or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer's request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

43 Contractor's Representative

- 43.1 The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract.

Unless the Contractor's Representative is named in the Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

- 43.2 The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Engineer's prior consent, and the Engineer shall be notified accordingly.
- 43.3 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at anytime revoke the delegation. Any delegation or revocation shall not take effect until the Engineer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

- 43.4 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

44 Subcontractors

- 44.1 The Contractor shall not subcontract the whole of the Works.

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

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

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

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

45 Assignment of Benefit of Subcontract

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

assignment takes effect.

46 Co-operation

- 46.1 The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:
- a) The Procuring Entity's Personnel,
 - b) Any other contractors employed by the Procuring Entity, and
 - c) The personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

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

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

47 Setting Out

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

The Procuring Entity shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

- 47.2 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/or Cost, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 47.3 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this.

48 Safety Procedures

The Contractor shall:

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

49 Quality Assurance

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor itself shall be apparent on the document

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

4.10 Site Data

The Procuring Entity shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Procuring Entity's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Procuring Entity shall similarly make available to the Contractor all such data which come into the Procuring Entity's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

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

4.11 Sufficiency of the Accepted Contract Amount

4.11.1 The Contractor shall be deemed to:

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

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

4.12 Unforeseeable Physical Conditions

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

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

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

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

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

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

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

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

4.13 Rights of Way and Facilities

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

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

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

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

4.15 Access Route

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

Except as otherwise stated in these Conditions:

- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- c) the Procuring Entity shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- d) the Procuring Entity does not guarantee the suitability or availability of particular access routes; and
- e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Particular Conditions:

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

417 Contractor's Equipment

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

418 Protection of the Environment

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

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

419 Electricity, Water and Gas

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

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

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

420 Procuring Entity's Equipment and Free-Issue Materials

4.20.1 The Procuring Entity shall make the Procuring Entity's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

- a) The Procuring Entity shall be responsible for the Procuring Entity's Equipment, except that
- b) the Contractor shall be responsible for each item of Procuring Entity's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

4.20.2 The appropriate quantities and the amounts due (at such stated prices) for the use of Procuring Entity's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

The Procuring Entity shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Procuring Entity shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Procuring Entity shall immediately rectify the notified shortage, defect or default.

4.20.3 After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Procuring Entity of liability for any shortage, defect or default not apparent from a visual inspection.

421 Progress Reports

4.21.1 Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.

4.21.2 Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

Each report shall include:

- a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
- b) photographs showing the status of manufacture and of progress on the Site;
- c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - i) commencement of manufacture,
 - ii) Contractor's inspections,
 - iii) tests, and
 - iv) shipment and arrival at the Site;
- d) the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];
- e) copies of quality assurance documents, test results and certificates of Materials;
- f) list of notices given under Sub-Clause 2.5 [Procuring Entity's Claims] and notices given under Sub-Clause 20.1 [Contractor's Claims];
- g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
- h) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4213 The Contractor shall provide immediate notification to the Engineer of incidents in the following categories. Full details of such incidents shall be provided to the Engineer within the time frame agreed with the Engineer.

- a) confirmed or likely violation of any law or international agreement;
- b) any fatality or serious injury;
- c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary);
- d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or
- e) any allegation of sexual harassment or sexual misbehavior, child abuse, defilement, or other violations involving children.

422 Security of the Site

Unless otherwise stated in the Particular Conditions:

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

423 Contractor's Operations on Site

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

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

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

424 Fossils

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

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

20.1 [Contractor's Claims] to:

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

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

5. NOMINATED SUB CONTRACTORS

5.1 Definition of “nominated Subcontractor

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

- a) Who is stated in the Contract as being a nominated Subcontractor, or
- b) whom the Engineer, under Clause 13 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

5.2 Objection to Nomination

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

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

5.3 Payments to nominated Subcontractors

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

54 Evidence of Payments

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

- a) Submits this reasonable evidence to the Engineer, or
- b) i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, then the Procuring Entity may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Procuring Entity, the amount which the nominated Subcontractor was directly paid by the Procuring Entity.

6 STAFF AND LABOR

61 Engagement of Staff and Labor

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

62 Rates of Wages and Conditions of Labor

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

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

63 Persons in the Service of Procuring Entity

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

64 Labor Laws

The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

65 Working Hours

No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the SCC, unless:

- a) Otherwise stated in the Contract,
- b) The Engineer gives consent, or
- c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.

66 Facilities for Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Procuring Entity's Personnel as stated in the Specification.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

67 Health and Safety

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

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

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

6.7.3 HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

68 Contractor's Superintendence

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

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

69 Contractor's Personnel

69.1 The Contractor's Personnel specified in the SCC shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- a) Persists in any misconduct or lack of care,
- b) Carries out duties incompetently or negligently,
- c) Fails to conform with any provisions of the Contract,
- d) Persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
- e) Based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works.

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

6.10 Records of Contractor's Personnel and Equipment

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

6.11 Disorderly Conduct

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

6.12 Foreign Personnel

6.12.1 The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Procuring Entity will, if requested by the Contractor, use his Lowest endeavors in a timely and expeditious manner to assist the Contractor or in obtaining any local, state, national or government permission required for bringing in the Contractor's personnel.

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

6.13 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

6.14 Supply of Water

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

6.15 Measures against Insect and Pest Nuisance

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

6.16 Alcoholic Liquor or Drugs

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

6.17 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

6.18 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.

6.19 Funeral Arrangements

The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

620 Prohibition of Forced or Compulsory Labor

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

621 Prohibition of Harmful Child Labor

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labor laws of the Country have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

622 Employment Records of Workers

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

623 Workers' Organizations

The Contractor shall comply with laws on workers' rights to form and to join workers' organizations without interference and to bargain collectively.

624 Non-Discrimination and Equal Opportunity

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

7. PLANT, MATERIALS AND WORKMANSHIP

7.1 Manner of Execution

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

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

7.2 Samples

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

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

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

7.3 Inspection

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

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

- 732 The Contractor shall give the Procuring Entity's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.
- The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.
- 74 Testing**
- 741 This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).
- 742 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.
- The Engineer may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.
- 743 The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.
- If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Procuring Entity is responsible, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) Payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 744 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.
- 75 Rejection**
- 751 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.
- 752 If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Procuring Entity to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity.
- 76 Remedial Work**
- 761 Notwithstanding any previous test or certification, the Engineer may instruct the Contractor to:
- a) remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
 - b) remove and re-execute any other work which is not in accordance with the Contract, and
 - c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

- 7.62 The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).
- 7.63 If the Contractor fails to comply with the instruction, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity all costs arising from this failure.

7.7 Ownership of Plant and Materials

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

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

7.8 Royalties

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

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

8 COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

- 8.1.1 Except as otherwise specified in the Special Conditions of Contract, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Engineer's notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:
- a) Contract by relevant authorities of the Country;
 - b) delivery to the Contractor of reasonable evidence of the Procuring Entity's financial arrangements (under Sub-Clause 2.4 [Procuring Entity's Financial Arrangements]);
 - c) signature of the Contract Agreement by both Parties, and if required, approval of the except if otherwise specified in the SCC, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works
 - d) receipt by the Contract or of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding Procuring Entity guarantee has been delivered by the Contractor.
- 8.1.2 If the said Engineer's instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [Termination by Contractor].
- 8.1.3 The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

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

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

83 Programme

- 83.1 The Contractor shall submit a detailed time programme to the Engineer within 14 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:
- a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
 - b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - c) the sequence and timing of inspections and tests specified in the Contract, and
 - d) a supporting report which includes:
 - i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
 - ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.
- 83.2 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.
- 83.3 The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 [Variation Procedure].
- 83.4 If, at anytime, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer in accordance with this Sub-Clause.

84 Extension of Time for Completion

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

85 Delays Caused by Authorities

If the following conditions apply, namely:

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

86 Rate of Progress

86.1 If, at any time:

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

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

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

87 Delay Damages

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

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

88 Suspension of Work

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

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

89 Consequences of Suspension

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

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

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

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

8.10 Payment for Plant and Materials in Event of Suspension

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

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

8.11 Prolonged Suspension

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

8.12 Resumption of Work

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

9. TESTS ON COMPLETION

9.1 Contractor's Obligations

- 9.1.1 The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].
- 9.1.2 The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contract or will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.
- 9.1.3 In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Procuring Entity on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

- 9.2.1 If the Tests on Completion are being unduly delayed by the Procuring Entity, Sub-Clause 7.4 [Testing] (fifth paragraph) and/or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contract or may fix and of which he shall give notice to the Engineer.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Procuring Entity's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contract or and the results of the Tests shall be accepted as accurate.

9.3 Retesting

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

94 Failure to Pass Tests on Completion

- 94.1 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Engineer shall be entitled to:
- a) Order further repetition of Tests on Completion under Sub-Clause 9.3;
 - b) If the failure deprives the Procuring Entity of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Procuring Entity shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 [Failure to Remedy Defects]; or
 - c) Issue a Taking-Over Certificate, if the Procuring Entity so requests.
- 94.2 In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amount as shall be appropriate to cover the reduced value to the Procuring Entity as a result of this failure. Unless the relevant reduction for this failure is stated (or its method of calculation is defined) in the Contract, the Procuring Entity may require the reduction to be (i) agreed by both Parties (in full satisfaction of this failure only) and paid before this Taking-Over Certificate is issued, or
- (ii) determined and paid under Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations].

10. PROCURING ENTITY'S TAKING OVER

10.1 Taking Over of the Works and Sections

- 10.1.1 Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Procuring Entity when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.
- 10.1.2 The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

The Engineer shall, within 30 days after receiving the Contractor's application:

- a) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
 - b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.
- 10.1.3 If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 30 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

10.2 Taking Over of Parts of the Works

- 10.2.1 The Engineer may, at the sole discretion of the Procuring Entity, issue a Taking-Over Certificate for any part of the Permanent Works.

The Procuring Entity shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Procuring Entity does use any part of the Works before the Taking-Over Certificate is issued:

- a) The part which is used shall be deemed to have been taken over as from the date on which it is used,
- b) The Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Procuring Entity, and
- c) If requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

- 1022 After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.
- 1023 If the Contractor incurs Cost as a result of the Procuring Entity taking over and/or using a part of the Works, other than such use as is specified in the Contractor agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such Cost-plus profit, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this Cost and profit.
- 1024 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages there after for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages] and shall not affect the maximum amount of these damages.

103 Interference with Tests on Completion

- 103.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Procuring Entity is responsible, the Procuring Entity shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

- 1032 If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

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

- 1033 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

104 Surfaces Requiring Reinstatement

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

11. DEFECTS LIABILITY

11.1 Completion of Outstanding Work and Remedying Defects

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

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

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Procuring Entity.

11.2 Cost of Remedying Defects

- 11.2.1 All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:
- a) Any design for which the Contractor is responsible,
 - b) Plant, Materials or workmanship not being in accordance with the Contract, or
 - c) Failure by the Contractor to comply with any other obligation.
- 11.2.2 If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity, and Sub-Clause 13.3 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

- 11.3.1 The Procuring Entity shall be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.
- 11.3.2 If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

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

11.5 Removal of Defective Work

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

11.6 Further Tests

If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 30 days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

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

11.8 Contractor to Search

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

11.9 Completion Certificate

11.9.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

11.9.2 The Engineer shall issue the Performance Certificate within 30 days after the latest of the expiry dates of the Defects Notification Periods, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Performance Certificate shall be issued to the Procuring Entity.

11.9.3 Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

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

11.11 Clearance of Site

11.11.1 Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

11.11.2 If all these items have not been removed within 30 days after receipt by the Contractor of the Performance Certificate, the Procuring Entity may sell or otherwise dispose of any remaining items. The Procuring Entity shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Procuring Entity's costs, the Contractor shall pay the outstanding balance to the Procuring Entity.

12 MEASUREMENT AND EVALUATION

12.1 Works to be Measured

12.1.1 The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

- 1212 Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:
- a) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and
 - (b) supply any particulars requested by the Engineer.
- If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.
- 1213 Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.
- 1214 If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

122 Method of Measurement

Except as otherwise stated in the Contract and notwithstanding local practice:

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

123 Evaluation

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

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

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

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

- a)
 - I) the measured quantity of the item is changed by more than 25% from the quantity of this item in the Bills of Quantities or another Schedule,
 - ii) This change in quantity multiplied by such specified rate for this item exceeds 0.25% of the Accepted Contract Amount,
 - iii) This change in quantity directly changes the Cost per unit quantity of this item by more than 1%, and
 - iv) This item is not specified in the Contract as a "fixed rate item"; or
- b)
 - i) the work is instructed under Clause 13 [Variations and Adjustments],
 - ii) no rate or price is specified in the Contract for this item, and
 - iii) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

- 123.3 Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of the matters described in sub-paragraph (a) and/or (b), as

applicable. If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with profit, taking account of any other relevant matters.

- 1234 Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.
- 1235 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (*which would be the tender price*), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: (*corrected tender price – tender price*)/tender price X 100.

124 Omissions

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

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

13. VARIATIONS AND ADJUSTMENTS

13.1 Right to Vary

- 13.1.1 Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal.
- 13.1.2 The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.
Each Variation may include:
- a) Changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
 - b) Changes to the quality and other characteristics of any item of work,
 - c) Changes to the levels, positions and/or dimensions of any part of the Works,
 - d) Omission of any work unless it is to be carried out by others,
 - e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
 - f) changes to the sequence or timing of the execution of the Works.
- 13.1.3 The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

132 Value Engineering

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

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

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

- a) The Contractor shall design this part,
- b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
- c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:
 - i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and
 - ii) the reduction (if any) in the value to the Procuring Entity of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

132.3 However, if amount (i) is less than amount (ii), there shall not be a fee.

133 Variation Procedure

133.1 If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

- a) A description of the proposed work to be performed and a programme for its execution,
- b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
- c) the Contractor's proposal for evaluation of the Variation.

133.2 The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

133.3 Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

134 Payment in Applicable Currencies

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

13.5 Provisional Sums

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

13.6 Daywork

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

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

- 13.6.2 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:
- a) The names, occupations and time of Contractor's Personnel,
 - b) The identification, type and time of Contractor's Equipment and Temporary Works, and
 - c) The quantities and types of Plant and Materials used.
- 13.6.3 One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

13.7 Adjustments for Changes in Legislation

- 13.7.1 The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.
- 13.7.2 If the Contract or suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) Payment of any such Cost, which shall be included in the Contract Price.
- After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

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

13.8 Adjustments for Changes in Cost

- 13.8.1 In this Sub-Clause, “table of adjustment data” means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.
- 13.8.2 If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labor, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.
- 13.8.3 The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

$P_n = a + b \frac{L_n}{L_o} + c \frac{E_n}{E_o} + d \frac{M_n}{M_o} + \dots$ where:

“ P_n ” is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period “ n ”, this period being a month unless otherwise stated in the SCC;

“ a ” is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

“ b ”, “ c ”, “ d ” ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works, as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labor, equipment and materials;

“ L_n ”, “ E_n ”, “ M_n ”, ... are the current cost indices or reference prices for period “ n ”, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

“ L_o ”, “ E_o ”, “ M_o ”, ... are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

- 1384 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.
- 1385 In cases where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central Procuring Entity of the Country, of this relevant currency on the above date for which the index is required to be applicable.
- 1386 Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.
- 1387 If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, which ever is more favorable to the Procuring Entity.
- 1388 The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14. CONTRACT PRICE AND PAYMENT

141 The Contract Price

- 141.1 Unless otherwise stated in the Particular Conditions:
- a) the Contract Price shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
 - b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
 - c) any quantities which may be set out in the Bills of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
 - i) of the Works which the Contractor is required to execute, or
 - ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
 - d) the Contractor shall submit to the Engineer, within 30 days after the Commencement Date, a proposed breakdown of each lumpsum price in the Schedules.
- 141.2 The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.
- 141.3 Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts there for, imported by the Contractor for the sole purpose of executing the Contract shall be exempt from the payment of import duties and taxes upon importation.

142 Advance Payment

- 142.1 The Procuring Entity shall make an advance payment, as an interest- free loan for mobilization and cashflow support, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the **SCC**. Unless and until the Procuring Entity receives this guarantee, or if the total advance payment is not stated in the **SCC**, this Sub-Clause shall not apply.
- 142.2 The Engineer shall deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Procuring Entity receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable Procuring Entity or financial institution selected by the Contractor and shall be in the form annexed to the Particular Conditions or in another form approved by the Procuring Entity.

- 1423 The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.
- 1424 Unless stated otherwise in the SCC, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:
- a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount less Provisional Sums; and
 - b) Deductions shall be made at the amortization rate stated in the SCC of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.
- 1425 If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Procuring Entity], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Procuring Entity], except for Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], payable by the Contractor to the Procuring Entity.

143 Application for Interim Payment Certificates

- 143.1 The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].
- 1432 The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:
- a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
 - b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
 - c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the SCC to the total of the above amounts, until the amount so retained by the Procuring Entity reaches the limit of Retention Money (if any) stated in the SCC;
 - d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];
 - e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
 - f) any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
 - g) the deduction of amounts certified in all previous Payment Certificates.
- 1433 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: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

144 Schedule of Payments

- 144.1 If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

1442 If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

145 Plant and Materials intended for the Works (*see SCC for lists*)

1451 If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

1452 If the lists referred to in sub-paragraphs (b) (i) or (c) (i) below are not included in the Schedules, this Sub-Clause shall not apply. The Engineer shall determine and certify each addition if the following conditions are satisfied:

- a) The Contractor has:
 - i) Kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
 - ii) Submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence; and either:
- b) The relevant Plant and Materials:
 - i) Are those listed in the Schedules for payment when shipped,
 - ii) Have been shipped to the Country, enroute to the Site, in accordance with the Contract; and
 - iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and an Procuring Entity guarantee in a form and issued by an entity approved by the Procuring Entity in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration;
- c) the relevant Plant and Materials:
 - i) are those listed in the Schedules for payment when delivered to the Site, and
 - ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

1453 The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

1454 The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

146 Issue of Interim Payment Certificates

1461 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the Engineer shall, within 30 days after receiving a Statement and supporting

documents, deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made

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

1462 An Interim Payment Certificate shall not be withheld for any other reason, although:

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

1463 The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

147 Payment

147.1 The Procuring Entity shall pay to the Contractor:

- a) The first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;
- b) the amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents; or, at a time when the Procuring Entity's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the amount shown on any statement submitted by the Contractor within 14 days after such statement is submitted, any discrepancy being rectified in the next payment to the Contractor; and
- c) the amount certified in the Final Payment Certificate within 56 days after the Procuring Entity receives this Payment Certificate; or, at a time when the Procuring Entity's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the undisputed amount shown in the Final Statement within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2 [Termination by Contractor].

147.2 Payment of the amount due in each currency shall be made in to the Procuring Entity account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

148 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Particular Conditions, these financing charges shall be calculated at the annual rate of three percentage points above the discount rate of the central Procuring Entity in the country of the currency of payment, or if not available, the inter-Procuring Entity offered rate, and shall be paid in such currency.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

149 Payment of Retention Money

149.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half

(50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

- 1492 Promptly after the latest of the expiry dates of the Defects Notification Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.
- 1493 However, if any work remains to be executed under Clause 11 [Defects Liability], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.
- 1494 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].
- 1495 Unless otherwise stated in the Particular Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a guarantee, in the form annexed to the Particular Conditions or in another form approved by the Procuring Entity and issued by a reputable Procuring Entity or financial institution selected by the Contractor, for the second half of the Retention Money. The Contractor shall ensure that the guarantee is in the amounts and currencies of the second half of the Retention Money and is valid and enforceable until the Contract or has executed and completed the Works and remedied any defects, as specified for the Performance Security in Sub-Clause 4.2. On receipt by the Procuring Entity of the required guarantee, the Engineer shall certify and the Procuring Entity shall pay the second half of the Retention Money. The release of the second half of the Retention Money against a guarantee shall then be in lieu of the release under the second paragraph of this Sub-Clause. The Procuring Entity shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.
- 1496 If the Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under it when the Taking-Over Certificate is issued is more than half of the Retention Money, then the Retention Money guarantee will not be required. If the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the Retention Money guarantee will only be required for the difference between half of the Retention Money and the amount guaranteed under the Performance Security.

14.10 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause

14.3 [Application for Interim Payment Certificates], showing:

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

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

14.11 Application for Final Payment Certificate

- 14.11.1 Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:
- a) The value of all work done in accordance with the Contract, and
 - b) Any further sums which the Contractor considers to be due to him under the Contract otherwise.
- 14.11.2 If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require within 30 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

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

14.12 Discharge

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

14.13 Issue of Final Payment Certificate

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

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

14.13.1 If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 30 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Procuring Entity's Liability

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

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

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

14.15 Currencies of Payment

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

- a) If the Accepted Contract Amount was expressed in Local Currency only:
 - (i) The proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
 - ii) payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
 - iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a) (i) above;

- b) payment of the damages specified in the **SCC**, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- c) other payments to the Procuring Entity by the Contractor shall be made in the currency in which the sum was expended by the Procuring Entity, or in such currency as may be agreed by both Parties;
- d) if any amount payable by the Contractor to the Procuring Entity in a particular currency exceeds the sum payable by the Procuring Entity to the Contractor in that currency, the Procuring Entity may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the central Procuring Entity of the Country.

15. TERMINATION BY PROCURING ENTITY

15.1 Notice to Correct

If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

15.2 Termination by Procuring Entity

- 1521 The Procuring Entity shall be entitled to terminate the Contract if the Contractor:
- a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
 - b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
 - c) without reasonable excuse fails:
 - (i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
 - ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub- Clause 7.6 [Remedial Work], within 30 days after receiving it,
 - d) subcontracts the whole of the Works or as signs the Contract without the required agreement,
 - e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
 - f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
 - i) for doing or forbearing to do any action in relation to the Contract, or
 - ii) for showing or for bearing to show favor or disfavor to any person in relation to the Contract, or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination, or
 - g) based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Appendix B to these General Conditions, in competing for or in executing the Contract.
- 1522 In any of these events or circumstances, the Procuring Entity may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (e) or (f) or (g), the Procuring Entity may by notice terminate the Contract immediately.
- 1523 The Procuring Entity's election to terminate the Contract shall not prejudice any other rights of the Procuring Entity, under the Contract or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his Lowest efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Procuring Entity may complete the Works and/or arrange for any other entities to do so. The Procuring Entity and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Procuring Entity shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Procuring Entity, these items may be sold by the Procuring Entity in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

153 Valuation at Date of Termination

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

154 Payment after Termination

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

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

155 Procuring Entity's Entitlement to Termination for Convenience

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

155.2 After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

156 Fraud and Corruption

The Procuring Entity requires compliance with the national law and regulations against corruption. All available sanctions will apply where corruption is detected.

16. SUSPENSION AND TERMINATION BY CONTRACTOR

16.1 Contractor's Entitlement to Suspend Work

16.1.1 If the Engineer fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or the Procuring Entity fails to comply with Sub-Clause 2.4 [Procuring Entity's Financial Arrangements] or Sub-Clause 14.7 [Payment], the Contractor may, after giving not less than 21days' notice to the Procuring Entity, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

16.1.2 Notwithstanding the above, if the Procuring Entity has suspended disbursements under the loan or credit from which payments to the Contractor are being made, in whole or in part, for the execution of the Works, and no alternative funds are available as provided for in Sub-Clause 2.4 [Procuring Entity's Financial Arrangements], the Contractor may by notice suspend work or reduce the rate of work at any time, but not less than 7 days after the Procuring Entity having received the suspension notification from the Procuring Entity.

- 16.13 The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2[Termination by Contractor].
- 16.14 If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.
- 16.15 If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 16.16 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

16.2 Termination by Contractor

- 16.21 The Contractor shall be entitled to terminate the Contract if:
- a) the Contractor does not receive the reasonable evidence within 42 days after giving notice under Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work] in respect of a failure to comply with Sub-Clause 2.4 [Procuring Entity's Financial Arrangements],
 - b) the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
 - c) the Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [Procuring Entity's Claims]),
 - d) the Procuring Entity substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,
 - e) the Procuring Entity fails to comply with Sub-Clause 1.6 [Contract Agreement] or Sub-Clause 1.7 [Assignment],
 - f) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
 - g) the Procuring Entity becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.
 - h) The Contractor does not receive the Engineer's instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].
- 16.22 In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Procuring Entity, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.
- 16.23 In the event the Procuring Entity suspends the loan or credit from which part or whole of the payments to the Contractor are being made, if the Contractor has not received the sums due to him upon expiration of the 14 days referred to in Sub-Clause 14.7 [Payment] for payments under Interim Payment Certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under Sub-Clause 14.8 [Delayed Payment], take one of the following actions, namely (i) suspend work or reduce the rate of work under Sub-Clause 16.1 above, or (ii) terminate the Contract by giving notice to the Procuring Entity, with a copy to the Engineer, such termination to take effect 14 days after the giving of the notice.

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

163 Cessation of Work and Removal of Contractor's Equipment

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

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

164 Payment on Termination

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

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

17. RISK AND RESPONSIBILITY

17.1 Indemnities

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

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

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

17.2 Contractor's Care of the Works

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

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

1723 If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

1724 The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

173 Procuring Entity's Risks

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

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

174 Consequences of Procuring Entity's Risks

1741 If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

1742 If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [Procuring Entity's Risks], Cost plus profit shall be payable.

1743 After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

175 Intellectual and Industrial Property Rights

1751 In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trademark, tradename, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

1752 Whenever a Party does not give notice to the other Party of any claim within 30 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

1753 The Procuring Entity shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- a) An unavoidable result of the Contractor's compliance with the Contract, or
- b) A result of any Works being used by the Procuring Entity:

- i) For a purpose other than that indicated by, or reasonably to be inferred from, the
- ii) Contract, or
- iii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

1754 The Contractor shall indemnify and hold the Procuring Entity harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

1755 If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6 Limitation of Liability

1761 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4 (b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

1762 The total liability of the Contractor to the Procuring Entity, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Procuring Entity's Equipment and Free- Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the SCC, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.

1763 This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Procuring Entity's Accommodation/Facilities

1771 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contract or until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

1772 If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Procuring Entity is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18. INSURANCE

18.1 General Requirements for Insurances

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

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

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

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

18.2 Insurance for Works and Contractor's Equipment

- 18.2.1 The insuring Party shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under subparagraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.
- 18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

- 1823 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.
- 1824 Unless otherwise stated in the Particular Conditions, insurances under this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
 - b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
 - c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks],
 - d) shall also cover, to the extent specifically required in the tendering documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Procuring Entity of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Procuring Entity's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the SCC (if an amount is not so stated, this sub-paragraph (d) shall not apply), and
 - e) may however exclude loss of, damage to, and reinstatement of:
 - i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
 - ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
 - iii) a part of the Works which has been taken over by the Procuring Entity, except to the extent that the Contractor is liable for the loss or damage, and
 - iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].
- 1825 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

183 Insurance against Injury to Persons and Damage to Property

- 183.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.
- 1832 This insurance shall be for a limit per occurrence of not less than the amount stated in the SCC, with no limit on the number of occurrences. If an amount is not stated in the SCC, this Sub-Clause shall not apply. Unless otherwise stated in the Particular Conditions, the insurances specified in this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
 - b) Shall be in the joint names of the Parties,
 - c) Shall be extended to cover liability for all loss and damage to the Procuring Entity's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
 - d) May however exclude liability to the extent that it arises from:
 - i) The Procuring Entity's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works,
 - ii) damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects, and
 - iii) a cause listed in Sub-Clause 17.3 [Procuring Entity's Risks], except to the extent that cover is available at commercially reasonable terms.

184 Insurance for Contractor's Personnel

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

19. FORCE MAJEURE

191 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

- a) Which is beyond a Party's control,
- b) Which such Party could not reasonably have provided against before entering into the Contract,
- c) which, having arisen, such Party could not reasonably have avoided or overcome, and
- d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- ii) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
- iii) riot, commotion, disorder, strike or lock out by persons other than the Contractor's Personnel,
- iv) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio- activity, and
- v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

192 Notice of Force Majeure

- 192.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
- 192.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

193 Duty to Minimize Delay

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

194 Consequences of Force Majeure

194.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause

20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].

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

195 Force Majeure Affecting Subcontractor

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

196 Optional Termination, Payment and Release

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

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

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

197 Release from Performance

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

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

20. CLAIMS, DISPUTES AND ARBITRATION

20.1 Contractor's Claims

- 20.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 20.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.
- 20.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 20.1.3 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Engineer 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 Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.
- 20.1.4 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer 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 Engineer may reasonably require; and
 - c) The Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.
- 20.1.5 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 Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.
- 20.1.6 Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.
- 20.1.7 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.
- 20.1.8 If the Engineer does not respond within the time frame defined in this Clause, either Party may consider that the claim is rejected by the Engineer and any of the Parties may refer to Arbitration in accordance with Sub-Clause 20.4 [Arbitration].
- 20.1.9 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 Sub-Clause 20.3 (f).

20.2 Amicable Settlement

Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 20.1 above should move to commence arbitration after 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.

20.3 Matters that may be referred to arbitration

Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) The appointment of a replacement Engineer upon the said person ceasing to act.
- b) Whether or not the issue of an instruction by the Engineer 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 Contract or agree otherwise in writing.

20.4 Arbitration

- 204.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.
- 204.2 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.
- 204.3 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.
- 204.4 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.
- 204.5 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.
- 204.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
- 204.7 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.
- 204.7 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Engineer shall not be altered by reason of any arbitration being conducted during the progress of the Works.
- 204.8 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

205 Arbitration with National Contractors

205.1 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) Institution of Engineers of Kenya
- ii) Chartered Institute of Arbitrators (Kenya Branch)
- iii) Association of Consulting Engineers of Kenya

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

206 Arbitration with Foreign Contractors

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

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

207 Alternative Arbitration Proceedings

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

208 Failure to Comply with Arbitrator's Decision

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

208.2 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.

10.7 Contract operations continue

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.

SECTION IX - SPECIAL CONDITIONS OF CONTRACT

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

Conditions	GCC Clause	Data
Procuring Entity's name and address	1	State Department for Public Works
Time for Completion	1	104 Weeks
Engineer's name and address	1	Chief Engineer (Structural) P.O. Box 30743-00100, Nairobi.
Electronic transmission	1.3	If so allowed the systems of electronic transmission shall be info@publicworks.go.ke
Time for the Parties entering into a Contract Agreement	1.6	14 days after notification of award of Contract.
Time for access to the Site	2.1	Not later than the commencement date.
Engineer's Authority to make variations.	3.1.2 (b) (ii)	Variations resulting in an increase above the Contract Amount shall require approval of the Procuring Entity
Performance Security	4.2.2	5% of Accepted Contract Amount.
Contractor's Representative's name	4.3	<i>[insert the name of the Contractor's Representative agreed by the Procuring Entity prior to Contract signature]</i>
Rates of Wages and Conditions of Labor	6.2	To conform to Labour Laws. (Rates to be filled in the Schedule of Labour)
Working Hours	6.5	Normal working Hours shall be 8.00am to 5.00pm.
Key Personnel names	6.9	<i>[insert the name of each Key Personnel agreed by the Procuring Entity prior to Contract signature]</i>
Commencement of Works	8.1	Shall be agreed with Project Manager
Delay Damages	8.7	Delay damages shall be 0.005% of Contract Price per day of delay.
Defects Notification Period		365 days.

Conditions	GCC Clause	Data
Adjustments for Changes in Cost	13.8.3	Period "n" applicable to the adjustment multiplier "Pn": ____ <i>[Insert the period if different from one (1) month 'if period " n" is one (1) month, insert "not applicable"]</i>
Advance Payment	14.2.1	No Advance payment will be given
Percentage of Retention	14.3.2 (c)	10%
Limit of Retention	14.3.2 (c)	5% of the Accepted Contract Sum
Payment for Materials on site in Interim Certificates	14.5.3	80% of Cost of Materials. <i>(Prices to be filled in the Schedule of materials)</i>
Minimum Amount of Interim Payment Certificates	14.6	KShs. 5,000,000.00 (Five Million)
Interest on Delayed Payment	14.8	Three percentage points above the discount rate given by the Central bank of Kenya.
Release of Retention Money	14.9.1	First Moiety to be released after Practical Completion certificate is issued.
Periods for submission of insurance:	18.1.6	
a. evidence of insurance.		14 days
b. relevant policies		14 days
Maximum number of deductibles for insurance of the Procuring Entity's risks	18.2.4 (d)	NIL
Minimum amount of third- party insurance	18.3	KShs. 10,000,000.00
The place of arbitration	20.7.2	To be agreed by the Parties.

APPENDIX TO CONDITIONS OF CONTRACT

DESCRIPTION	CLAUSE	REMARKS
The Employer	1.1	State Department for Public Works, P. O. Box 30743-00100 Nairobi.
The Authorized Representative	1.1	Principal Secretary, State Department for Public Works, P. O. Box 30743-00100 Nairobi
Address	1.1	Telephone : +254 (0) 20 272 3101 Email Address : info@publicworks.go.ke
Project Manager	3.1.1	Chief Engineer (Structural), State Department for Public Works, P. O. Box 30743-00100 Nairobi Telephone : +254 (0) 20 272 3101 Email Address : info@publicworks.go.ke
Name of Contract	1.1	Proposed Completion of Ndau Seawall in Lamu County.
Contract No.	1.1	W.P. Item No: D109 CO/LAM/2301 JOB NO. 9781B.
Site Location		Ndau Island and Kizingitini Island, Lamu County
Works		Construction of Seawall, staircases, boat slipways, bollard, walkway pavements and backfilling
Contract Documents	1.5	Documents listed in clause 1.5 of condition of contract.
Date for Possession		Shall be agreed with Project Manager
Commencement/Start Date	8.1.1	Shall be agreed with Project Manager
Intended Completion Date	8.2	Shall be 104 weeks after Commencement Date.
Revised Works Programme	8.3	Contractor shall submit a revised program of works within 7 days of delivery of the Letter of Acceptance.
Program updates	8.3	The period between program updates is 14 days.
Amount to be withheld for the late submission of an updated program	8.3	The Entire certificate.
The minimum cover for insurance for the Works and of Plant and Materials in respect to Contractor's faulty design		NIL.
The minimum cover for insurance for loss or damage to equipment	18.2	Kshs. 1,000,000

DESCRIPTION	CLAUSE	REMARKS
The minimum for insurance of other property	18.2 18.3	Kshs. 10,000,000.
The minimum cover for personal injury or death insurance	18.3 18.4	<ul style="list-style-type: none"> For the contractor's employees is as per the APPLICABLE LAWS. And for other people is Kshs. 10,000,000
Other Compensation events	18	Those listed in condition of contract clause 18
The performance security	4.2	Shall be for the following minimum amounts equivalent as a percentage of the contract price is 5%
The rate of exchange for calculation of foreign currency payments	13.5	As per the prevailing exchange rate
The schedule of basic rates used in pricing by the Contractor		Contractor to attach
The liquidated and ascertained damages for the whole of the works	8.7 & 14.15	0.005% of Contract Price per day of delay.
Advance payments	14.2	SHALL NOT BE GRANTED
The price adjustment	13	SHALL apply
Period of Interim certificates	14.3	30 days (Monthly).
Period of honouring payment certificates	14.7	60 days.
Percentage value retained	14.3	10%
Limit of amount certified retained	14.3	5% of Contract Sum
Plants and Materials intended for the works	14.5	
Minimum amount of interim certificate	14.6	Kshs. 5,000,000
Defects Liability Period	11.1	365 days from practical completion

SCHEDULE OF MATERIALS:-BASIC PRICES

(Ref: Clause 7 & 14.5 of Conditions of Contract)

MATERIALS	UNIT	ORIGIN	PRICE	TRANSPORT COST FROM SOURCE OR ORIGIN	
Cement	Tonne				
Sand	Tonne				
Aggregate	Tonne				
Concrete Blocks Class A	No.				
Diesel	L				
Petrol	L				
Kerosene	L				
Oil and Lubricants	L				
Reinforcement Steel	Kg				
Hardcore any size	CM				
Coral Stone Boulders	CM				
Gabion boxes	CM				
Polyfelt TS1000	SM				

I certify that the above information is correct.

.....
(Title)

.....
(Signature)

.....
(Date)

Note

Prices of imported materials to be quoted CIF Mombasa or Nairobi as appropriate depending on whether materials are imported by the tenderer directly or through a local agent.

Transportation costs for imported materials to be quoted from Mombasa or Nairobi as appropriate to Lamu town, Ndaui and Kizingitini Villages in Lamu County depending on whether materials are imported directly by the tenderer or through a local agent.

Prices quoted shall be deemed to be based upon the current market rates (which are subject to confirmation by the Engineer). During the contract, the rates for materials listed under Clause 14.5 shall be increased or decreased by the amount assessed by the Engineer based upon the current market rates and the difference expressed as a percentage, between the rate set out in the schedule and the market rate at the time of the tender.

SCHEDULE OF LABOUR:- BASIC RATES
(Reference: Clause 6 of Conditions of Contract)

LABOUR CATEGORY
UNIT(MONTH/SHIFT/HOUR)

LABOUR CATEGORY	UNIT(MONTH/SHIFT /HOUR)	RATES (Kshs.)

Categories to be generally in accordance with those used by the Kenya Building Construction and Engineering and Allied Trades Workers' Union.

Section X - Contract Forms

Table of Forms

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM No. 2 - NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE

FORM No. 3 - CONTRACT AGREEMENT

FORM No. 4 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]

FORM No. 5 - PERFORMANCE SECURITY [Option 2 - Performance Bond]

FORM No. 6 - ADVANCE PAYMENT SECURITY

FORM No. 7 - RETENTION MONEY SECURITY

FORM No. I - 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*]

FORMAT

For the attention of Tenderer's Authorized Representative

Name:.....[insert Authorized Representative's name] Address: [insert Authorized Representative's Address] Telephones: [insert Authorized Representative's telephone/fax numbers] 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.]

Date of Transmission: This Notification is sent by: [email] on [date] (local time)

Procuring Entity: [insert the name of the Procuring Entity] Contract title: [insert the name of the contract]

Country: Kenya, County _____ (if the Procuring Entity is from a County)

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:

- a) Request a debriefing in relation the evaluation of your Tender, and/or
- b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Tenderer

Name: [insert name of successful Tenderer] Address: [insert address of the successful Tenderer] Contract price: [insert contract price of the successful Tender]

2 Other Tenderers: insert 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.]

	Name of Tenderer	Tender price	Evaluated Tender price	Comments (if any)
1				
2				
3				
4				
5				
6				
7				
Etc.				

1. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on *[insert date]* (local time).

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 (3) Business Days of receipt of this Notification of Intention to Award. Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

Attention: *[insert full name of person, if applicable]* **Title/position:** *[insert title/position]* **Procuring Entity:** *[insert name of Procuring Entity]* **Email address:** *[insert email address]*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) 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 (5) Business 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. 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.

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) Business Days from the date of publication of the Contract Award Notice.

2. How to make a complaint?

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).

Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]* Procuring

Entity: *[insert name of Procuring Entity]* Email

address: *[insert email address]*

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.

In summary, there are four essential requirements:

- a) 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.
- b) The complaint can only challenge the decision to award the contract.
- c) You must submit the complaint within the period stated above.
- d) You must include, in your complaint, all of the information necessary to support your case.
- e) The application must be accompanied by the fees set out in the Procurement Regulations, which shall not be refundable (information available from the Public Procurement Authority at www.ppoa.go.ke).

3. Standstill Period

- a) **DEADLINE:** The Standstill Period is due to end at midnight on *[insert date]* (local time).
 - i) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.

(ii) The Standstill Period may be extended as stated in Section 4 above.

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

Name_____

Title and Position_____

Signature_____

Date_____

FORM NO. 2 - NOTIFICATION OF AWARD

Letter of Acceptance

[letter head paper of the Procuring Entity]

[date]

FORMAT

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 SCC]* 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 our Agency.

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 X, Contract Forms, of the tender document.

We attach a copy of the Contract for your

Authorized Signature:

Name and Title of

Signatory: Name of

Agency:

Attachment: Contract Agreement

FORM NO. 3 – CONTRACT AGREEMENT

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

WHEREAS the Procuring Entity desires that the Worksknownas _____ should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these 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 Particular Conditions
 - e) The General Conditions;
 - f) The Specification
 - 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.

Signedby _____

_____(for the Procuring Entity)

Signedby _____

_____(for the Contractor)

FORM NO. 4 - PERFORMANCE SECURITY
– (Unconditional Demand Bank Guarantee)

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of Procuring*

Entity / Date: _____ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (herein after called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (herein after called "the Contract").
2. Further more, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Applicant, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (),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 this 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.

¹The 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(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

²Insert 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. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the pen ultimate paragraph: "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."

FORM No. 5 - 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 letter head]*

1. By this Bond _____ as Principal (hereinafter called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Oblige (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 here in provided for, are by reference made part hereof and are herein after referred to as the Contract.
- 3 NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the default, or shall promptly:
 - 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 upto a total not exceeding the amount of this Bond.
- 4 The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
- 5 Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named here in or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6 In testimony where of, the Contractor has here unto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly 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. 6 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee] [Guarantor letterhead or SWIFT identifier

code] [Guarantor letterhead or SWIFT identifier code]

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 _____ (herein after called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (herein after called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ () is to be made against an advance payment 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 _____ ()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 Applicant 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 Applicant 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 _____, 20____, ² whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Procuring Entity.

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. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "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."

FORM NO. 7 - 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] (herein after 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] (herein after called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys upto the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of [insert the second half of the Retention Money] is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of [insert amount in figures] _____ ([insert amount in words] _____) 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 foot notes) is for use in preparing this form and shall be deleted from the final product.

¹The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

²Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

ANNEXES

ANNEX A

SPECIFICATIONS FOR LAPTOP COMPUTER

S/No.	MINIMUM SPECIFICATIONS	PROVIDED SPECIFICATIONS
1.	Core i7 10 th Generation 6-Core	
2.	2.6 GHz (Upto 4.3GHz Technology, 9MB cache, 12 Threads)	
3.	NVIDIA Quadro P4200 8GB GDDR5 dedicated Professional Graphics (& Intel Graphics)	
4.	15.6 Inch Full HD Wide Viewing Angle IPS Display (1920X1080, non touch).	
5.	32GB RAM, 1TB SSD	
6.	Windows 11 Pro 64 Bit, CAM, NO Touch,	
7.	Blacklit QWERTY Keypad (UK layout)	
8.	Ports: 3x USB 3: 1x HDMI 2.0: audio jack: 2x USB 3.1 Type-CTM Thunderbolt TM 3 (DisplayPort TM 1.3)	
9.	Latest Anti- virus and Firewall software (latest version) with restore CDs, licences and manuals.	
10.	Leather carrying case	Must be supplied
11.	Manufacturer's brochure and specifications	Must be supplied
12.	One year parts replacement warrant	

Tenderer's Signature	
Date	Company rubber stamp

ANNEX B

SPECIFICATIONS FOR PROJECT VEHICLE

SPECIFICATION NO.	Page 1 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO:
	QTY:
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

SPECIFICATION	REQUIREMENT	TENDERER'S
Make	-	
Model	-	
Country of origin	-	
Manufacturer's literature and specifications supplied	Yes	_____Y/N

1. GENERAL

a) A Standard production, 4x4 Utility vehicle Double Cabin Pickup of latest design in the class, robust construction in current production.	Yes, Yes, Yes	_____Y/N
b) Supplied new.	Yes	_____Y/N
c) Designed to medium duty specifications, capable of operating in tropical conditions in extremes of mud and dust.	Yes, Yes	_____Y/N
d) Most suitable for operating on both "on and off" road conditions.	Yes	_____Y/N
e) Most suitable for personnel transportation.	Yes	_____Y/N

2. DIMENSIONS AND WEIGHTS

a) Overall length.	5,200mm	_____mm
b) Overall width.	1,800mm	_____mm
c) Overall height, min.	1,790mm	_____mm
d) Wheelbase.	3,000mm	_____mm
e) Ground clearance, min	200mm	_____mm
f) Max. G.V.W.	2,870Kg	_____Kg
g) Kerb weight	1,925Kg	_____Kg

Tenderer's Signature Date:	Company rubber stamp
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SPECIFICATION NO.	Page 2 of 7
TENDERER'S NAME _____ NO: _____	
TENDER NO: _____	ITEM NO: _____ QTY: _____
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

3. ENGINE

SPECIFICATION	REQUIREMENT	TENDERER'S
a) Make	-	
b) Model	-	
c) Country of origin	-	
d) Engine performance curves supplied.	Yes	_____(Y/N)
e) Engine type.	Specify	
f) Engine cooling system, water .	Yes,	_____(Y/N)
g) Piston displacement.	2400-2900cc	_____cc
h) Number of cylinders.	Specify	_____No.
i) Maximum power output, (Kw/rpm), min.	130Kw/3500rpm	_____Kw _____rpm
j) Maximum torque developed, (NM/rpm), min.	430Nm/2,500rpm	_____Nm Rpm
k) Air filter, disposable/oil bath	specify	
l) Oil and fuel filter type	Disposable	
m) Average fuel consumption (on full load) at		
(a) Urban driving, min	specify	_____Km/l
(b) Steady 50Km/h, min	specify	_____Km/l
(c) Steady 80Km/h, min	specify	_____Km/l
n) Fuel tank capacity, min.	70 Lt	_____Lt

4. TRANSMISSION

a) Automatic/ Manual	specify	
b) All synchromesh gearbox, with 2 speed reduction transfer gearbox.	Yes, Yes	_____Y/N

Tenderer's Signature Date:	Company rubber stamp
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SPECIFICATION NO.	Page 3 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO:
QTY:	
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

SPECIFICATION	REQUIREMENT	TENDERER'S
d) Transmission speeds	5 speedspeed
e) Permanent 4 WD or with selector from 2WD to 4WD.	specify	_____
f) differential lock provided	Yes	_____ Y/N
g) Freewheeling hubs fitted	Yes	_____ Y/N

5. BRAKES AND TYRES

a) Assisted hydraulic, dual brake system.	Yes, Yes	_____ Y/N
b) Brakes, disc at front or all round	Specify front	_____
	Rear	_____
c) Mechanical parking brake, to act on transmission or rear wheels	Yes	_____ Y/N
	Specify	_____
d) Tyre locally manufactured	Yes	_____ Y/N
e) Optimum tire size	Specify size	_____

6. SUSPENSION AND STEERING

a) Independent medium duty front and rear suspension	Yes	_____ Y/N
b) Medium duty leaf or coil springs with telescopic dampers.	Specify front	_____
	rear	_____
c) Manual/Assisted steering	Specify	_____ Y/N
d) Right Hand Drive steering.	Yes	_____ Y/N

7. DOUBLE CABIN

a) 4 No. side doors and rear side-swing door double cabin	Yes	_____ Y/N
b) To seat at least 5 adults (including driver) comfortably.	Yes	_____ Y/N
c) To be fitted with adequate winding/sliding windows for good ventilation and wide view	Yes	_____ Y/N

Tenderer's Signature Date:	Company rubber stamp
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SPECIFICATION NO.	Page 4 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO: QTY:
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

8. BODY AND FINISH

SPECIFICATION	REQUIREMENT	TENDERER'S
a) All exterior body panels made non-corrosive and all external steel fitting to be galvanized or painted.	Yes, Yes	_____Y/N
b) Anti-rust compound applied to underbody for sea side operation	Yes Specify compound	_____Y/N
c) Body finish, high gross colour (to be specified by user)	Yes	_____Y/N
d) Fitted with reclining and adjustable driver and passenger seats.	Yes	_____Y/N
e) Upholstery, reinforced PVC.	Yes	_____Y/N

9. ELECTRICAL SYSTEM AND INSTRUMENTS

a) System voltage, negative earth, with alternator charging	12V, Yes	_____Y/N
b) Battery capacity	1x12V, 70Ah	_____AH
c) Full lighting to conform to Cap 403 Subs. 23-Kenya Traffic Act.	Yes	_____Y/N
d) Standard instruments, gauges and warning lights for charging circuit, oil pressure, coolant temperature etc.	Yes, Yes, Yes	_____Y/N

10. EQUIPMENT

a) Medium duty front fender fitted.	Yes	_____Y/N
b) Medium duty hooks at rear and front	Yes	_____Y/N
c) Sunvisors supplied	Yes	_____Y/N
d) Rear view mirrors, external 2No. and inside 1No. supplied	Yes, Yes	_____Y/N
e) Spare wheel supplied	Yes Mandatory	_____Y/N

Tenderer's Signature

Company rubber stamp

Date:

SPECIFICATION NO.	Page 5 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO:
QTY:	
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

SPECIFICATION	REQUIREMENT	TENDERER'S
f) Hydraulic Jack and wheel brace supplied	Yes, Yes	_____ Y/N
g) Safety belts provided for all forward facing seats.	Yes	_____ Y/N
h) Extra heavy duty suspension – i.e. 4 and 2 double action shock absorbers at rear and front respectively.	Front 2 Rear 4	
i) 4 speaker FM, AM, SW radio-cassette system with appropriate aerial, 40W output, min.	Specify make and Model	
j) Security alarm and immobilizer fitted.	Yes Mandatory	_____ Y/N
k) Manufacturer's standard tool kit supplied	1 per vehicle	_____ Y/N
l) Multi lock	Yes Mandatory	_____ Y/N

11. OTHER ITEMS/EQUIPMENT – QUOTE SEPARATELY IF FITTED AS OPTION

a) Extra fuel tank fitted	Specify Standard/option	
Capacity, min	Specify	_____ Lt
b) Roof rack fitted.	Specify Standard/option. Specify the rack size.	_____ _____ mm
c) High raise jack and jacking point	Specify Standard/option	
d) Extended front Kangaroo bar	Specify Standard/option	
e) Front and rear light guard	Specify Standard/option	
f) Air conditioner	Yes Mandatory	_____ Y/N

Tenderer's Signature	Company rubber stamp
Date:	

SPECIFICATION NO.	Page 6 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO:
QTY:	
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

12. WARRANTY

SPECIFICATION	REQUIREMENT	TENDERER'S
a) Specimen of vehicle warranty to be submitted when tendering	Yes	_____Y/N
b) Each vehicle supplied to carry a statement of warranty.	Yes Mandatory	_____Y/N
c) Warranty duration min.,12 Months or 40,000 Km whichever occurs first.	specify	_____Months _____Km

13. MANUALS

a) All literature in the English language	Yes	_____Y/N
b) Repair Manual/CD supplied.	Specify which available 1 per vehicle Mandatory	_____Y/N
c) Parts catalogue/CD supplied.	Specify which available 1 per vehicle Mandatory	_____Y/N
d) Drivers handbook and service schedule supplied.	1 per vehicle Mandatory	_____Y/N

14. OTHER REQUIREMENT

a) Body construction and all fitments to conform to CAP 403 Kenya Traffic Act	Yes (Mandatory)	_____Y/N
b) Vehicle to be registered with the registrar of motor vehicles.	Yes (Mandatory)	_____Y/N
c) Vehicle to be inspected by the Chief Mechanical and Transport Engineer for compliance with the specifications prior to delivery to the user.	Yes	_____Y/N

Tenderer's Signature	Company rubber stamp
Date:	

SPECIFICATION NO.	Page 7 of 7
TENDERER'S NAME	NO:
TENDER NO:	ITEM NO:
QTY:	
DESCRIPTION: <u>DOUBLE CABIN, 4x4, L.W.B. 2400 - 2900cc.</u>	

TENDERER'S Column to be completed by ALL TENDERER'S

SPECIFICATION	REQUIREMENT	TENDERER'S
d) Franchise holder (represented in Kenya) If not, specify relationship with the Franchise holder	Yes Specify whether agent/dealer	_____ Y/N
e) Availability of spares	Indicate motor vehicle dealers who stock spare parts.	
f) Names and addresses of dealers/agents where back-up service can be obtained indicating the location of workshop facilities.	specify	
g) Firm to offer local training services for the drivers on daily maintenance checks and operation of the vehicle for a minimum of two days.	Yes Specify number of days	_____ Y/N _____ days

Tenderer's Signature Date:	Company rubber stamp
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