KENYA RURAL ROADS AUTHORITY

TENDER DOCUMENT

FOR

UPGRADING TO BITUMEN STANDARD OF AWASI-KATITO ROAD PROJECT

KISUMU COUNTY

TENDER NO. KeRRA/08/39/141/2025-2026

OPEN TENDER

JUNE, 2026

DIRECTOR (ROAD ASSET MANAGEMENT) **KENYA RURAL ROADS AUTHORITY** **P.O. BOX 48151 – 00100,** **NAIROBI.**	**DIRECTOR GENERAL,** **KENYA RURAL ROADS AUTHORITY** **P.O. BOX 48151 – 00100,** **NAIROBI.**

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INVITATION TO TENDER

Kenya Rural Roads Authority,
P.O. Box 48151–00100,
NAIROBI.
Email : dg@kerra.go.ke

TENDER NAME: UPGRADING TO BITUMEN STANDARD OF AWASI-KATITO ROAD
TENDER No: KeRRA/08/39/141/2025-2026

1. The *(Kenya Rural Roads Authority*) invites sealed tenders from eligible candidates for **UPGRADING TO BITUMEN STANDARD OF AWASI-KATITO ROAD**

2. Tendering will be conducted under open competitive method using a standardized tender document. Tendering is open to all qualified and interested Tenderers.

3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours *[0900 to1600 hours]* at the address given below.

The Director General,
Kenya Rural Roads Authority,
Block 'B', Barabara Plaza, off Mombasa Road,
Opposite KCAA along Airport South Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.

4. A complete set of tender documents may be purchased or obtained by interested tenders (who would want a hard copy of the tender document) upon payment of a non- refundable fees of (Kenya shillings) in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website(s) www.kerra.go.ke Tender documents obtained electronically will be free of charge.

5. Tender documents may be obtained electronically from the Authority's Website (*www.kerra.go.ke*). Tender documents obtained electronically will be free of charge.

6. Tender documents may be viewed and downloaded for free from the website (*www.kerra.go.ke*). Tenderers who download the tender document must forward their particulars immediately to (*procurementhq@kerra.go.ke*) to facilitate any further clarification or addendum.

7. All Tenders must be accompanied by a *Kenya Shillings Five Million Only [**Kshs.5,000,000.00**]* Tender Security.

8. The Tenderer shall chronologically serialize all pages of the tender documents submitted.

9. Completed tenders must be delivered to the address below on or before *[**30th June, 2026** at 11.00am]*. Electronic Tenders [*will not]* be permitted.

10. Tenders will be opened immediately after the deadline date and time specified above or any deadline

date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.

11. Late tenders will be rejected.

12. The addresses referred to above are:

A. Address for obtaining further information and for purchasing tender documents

Kenya Rural Roads Authority,
Block 'B', Ground Floor, South Wing,
Barabara Plaza, Off Mombasa Road,
Opposite KCAA along Airport South Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.

The officer to be contacted:
Deputy Director Supply Chain Management,
Email : procurementhq@kerra.go.ke
Tel : 020-7807600 (01-05) ; Mobile : +254 711 851103

B. Address for Submission of Tenders. (Office or Tender Box)

Physical address for hand Courier Delivery to office or Tender Box

The Director General,
Kenya Rural Roads Authority, Barabara Plaza, Block 'B',
3rd Floor, South Wing,
Off Airport South Road, Opposite KCAA along Mazao Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.

C. Address for Opening of Tenders.

Kenya Rural Roads Authority,
Block 'B', Ground Floor, South Wing, Barabara Plaza, Block 'B',
Off Airport South Road, Opposite KCAA along Mazao Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.

Deputy Director – Supply Chain Management
FOR. DIRECTOR GENERAL

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. Scope of Tender

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

2. Fraud and Corruption

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

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

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

2.4 Unfair Competitive Advantage -Fairness and transparency in the tender process require that the Firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender being tendered for. The Procuring Entity shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

3. Eligible Tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. Public employees and their close relatives *(spouses, children, brothers, sisters and uncles and aunts)* are not eligible to participate in the tender. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of JV members shall be specified in the **TDS.**

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

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

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

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

c) Has the same legal representative as another tenderer; or

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

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

f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer for the Contract implementation; or

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

h) Has a close business or family relationship with a professional staff of the Procuring Entity who:

i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; or

ii) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.

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

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

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8.A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or sub- consultants for any part of the Contract including related Services.

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

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state Government and/or public administration, (ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and (iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

3.9 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

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

3.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

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

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

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

4. Eligible Goods, Equipment, and Services

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

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

5. Tenderer's Responsibilities

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

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

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

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

B. Contents of Tender Documents

6. Sections of Tender Document

6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 8.

PART 1 Tendering Procedures

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

PART 2 Works Requirements

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

PART 3 Conditions of Contract and Contract Forms

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

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

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

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

7. Site Visit

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

8. Pre-Tender Meeting

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

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

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have

acquired the Tender Documents in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

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

9. Clarification and amendments of Tender Documents

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

10. Amendment of Tendering Document

10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.

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

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

C. <u>Preparation</u> <u>of</u> <u>Tenders</u>

11. Cost of Tendering

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

12. Language of Tender

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

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

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

13.2 In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

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

14. Form of Tender and Schedules

14.1 The Form of Tender and Schedules, including the Bill of Quantities*,* shall be prepared using the relevant form*s* furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested.

15. Alternative Tenders

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

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

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity. When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

16. Tender Prices and Discounts

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

16.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for

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

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

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

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

16.6 Where tenders are being invited for individual lots (contracts)or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 16.4, provided the Tenders for all lots (contracts) are opened at the same time.

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

17. Currencies of Tender and Payment

17.1 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings. A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

18. Documents Comprising the Technical Proposal

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

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

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

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

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

19.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established

by the Procuring Entity, a contractor or group of contractors qualifies for a margin of preference. Further the information will enable the Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

19.5 The purpose of the information described in ITT 19.4 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

19.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.3. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

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

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

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

i) if the procurement process is still ongoing, the tenderer will be disqualified from the procurement process,
ii) if the contract has been awarded to that tenderer, the contract award will be set aside,
iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 6.7 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring Entity that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tenderer.

20. Period of Validity of Tenders

20.1 Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse

the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

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

a) in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**;

b) in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

21. Tender Security

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

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

a) an unconditional Bank Guarantee issued by reputable commercial bank); or

b) an irrevocable letter of credit;

c) a Banker's cheque issued by a reputable commercial bank; or

d) another security specified **in the TDS**,

21.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 20.2.

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

21.5 If a Tender Security is specified pursuant to ITT 21.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the **TDS**. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined nonresponsive or a bidder declines to extend tender validity period.

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

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

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

f) if the successful Tenderer fails to:

i) sign the Contract in accordance with ITT 50; or

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

21.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.

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

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

22. Format and Signing of Tender

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

22.2 Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

22.3 The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the **TDS** and shall be attached to the Tender. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.

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

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

D. Submission and Opening of Tenders

23. Sealing and Marking of Tenders

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

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

The inner envelopes or packages or containers shall:
a) bear the name and address of the Procuring Entity.
b) bear the name and address of the Tenderer; and
c) bear the name and Reference number of the Tender.

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

24. Deadline for Submission of Tenders

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

24.2The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

25. Late Tenders

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

26. Withdrawal, Substitution, and Modification of Tenders

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

a) prepared and submitted in accordance with ITT 22 and ITT 23 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;"and

b) received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 24.

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

26.3No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

27. Tender Opening

27.1Except in the cases specified in ITT 23 and ITT 26.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the **TDS**, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 24.1, shall be as specified in the **TDS**.

27.2First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened, but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.

27.3Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice

contains a valid authorization to request the substitution and is read out at Tender opening.

27.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.

27.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.

27.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the **TDS**.

27.7 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 25.1).

27.8 The Procuring **Entity shall prepare minutes of the Tender Opening that shall include, as a minimum:**

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

27.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers upon request.

E. Evaluation and Comparison of Tenders

28. Confidentiality

28.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 46.

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

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

29. Clarification of Tenders

29.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the tenders, in accordance with ITT 33.

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

30. Deviations, Reservations, and Omissions

30.1 During the evaluation of tenders, the following definitions apply:

a) "Deviation" is a departure from the requirements specified in the tender document;

b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and

c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender document.

31. Determination of Responsiveness

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

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

a) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or

b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract; or

c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

31.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

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

32. Non-material Non-conformities

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

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

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

33. Arithmetical Errors

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

33.2 Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis:

a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.

b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, and subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and

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

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

34. Currency provisions

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

35. Margin of Preference and Reservations

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

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

36. Nominated Subcontractors

36.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.

36.2 Tenderers may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified in the **TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.

36.3 The subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated by the Procuring Entity in the **TDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

37. Evaluation of Tenders

37.1 The Procuring Entity shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Procuring Entity shall determine the Best Evaluated Tender in accordance with ITT 40.

37.2 To evaluate a Tender, the Procuring Entity shall consider the following:

a) price adjustment due to discounts offered in accordance with ITT 16;

b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 39;

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

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

37.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the

period of execution of the Contract, shall not be considered in Tender evaluation.

37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.**

38. Comparison of Tenders

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

39. Abnormally Low Tenders

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

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

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

40. Abnormally High Tenders

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

40.2 In case of an abnormally high tender price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:

i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.

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

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

41. Unbalanced and/or Front-Loaded Tenders

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the

tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.

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

a) accept the Tender; or

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

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

d) reject the Tender,

42. Qualifications of the Tenderer

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

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

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

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

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

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

43. Best Evaluated Tender

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

a) Most responsive to the Tender document; and

b) the lowest evaluated price.

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

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

and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. Award of Contract

45. Award Criteria

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

46. Notice of Intention to enter into a Contract

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

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

47. Standstill Period

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

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

48. Debriefing by the Procuring Entity

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

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

49. Letter of Award

49.1 Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

50. Signing of Contract

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

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

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

51. Appointment of Adjudicator

51.1 The Procuring Entity proposes the person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Performance Security

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

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

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

53. Publication of Procurement Contract

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

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

54. Procurement Related Complaints and Administrative Review

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

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

Section II - Tender Data Sheet (TDS)

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

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	A. General
ITT 1.1	The name of the contract is **UPGRADING TO BITUMEN STANDARD OF AWASI-KATITO ROADPROJECT** The reference number of the Contract is **KeRRA/08/39/141/2025-2026**
ITT 2.3	The Information made available on competing firms is as follows: **as indicated in ITT and qualification criteria**
ITT 2.4	The firms that provided consulting services for the contract being tendered for are: _____NA_____ _____ _____
ITT 3.1	Maximum number of members in the Joint Venture (JV) shall be: Two ***[2].***
B. Contents of Tender Document	
8.1	There shall be no pre-tender site visit meeting; however, a pre-tender site visit is mandatory. Bidders are required to visit site and thereafter collect a duly signed Pre-Tender Site Visit Certificate from Authorized Regional Officer per indicated in the Instruction to Bidders.
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 7 days before the date of tender opening.
ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published is **https://www.kerra.go.ke**
ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: (1) Name of Procuring Entity Kenya Rural Roads Authority, Block 'B', Ground Floor, South Wing, Barabara Plaza, off Mombasa Road, Opposite KCAA along Airport South Road, JKIA, Nairobi. P.O Box 48151-00100, Nairobi, Kenya **Email: procurementhq@kerra.go.ke** Physical address for hand Courier Delivery to an office or Tender Box Kenya Rural Roads Authority, 3rd Floor, South Wing, Barabara Plaza Block B, Airport South Road, Along Mazao Road, Opp KCAA Building, JKIA P.O Box 48151 – 00100, Nairobi, Kenya. Tel: 020-8013846, 2710451, 2710464 Email: procurementhq@kerra.go.Ke
C. Preparation of Tenders	
ITP 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: *N/A*
ITT 15.1	Alternative Tenders *shall not be* considered.
ITT 15.2	Alternative times for completion *shall not be* permitted.
ITT 15.4	Alternative technical solutions shall be permitted for the following parts of the Works:*N/A*
ITT 16.5	The prices quoted by the Tenderer shall be *fixed*
ITT 20.1	The Tender validity period shall be 210 days.

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 20.3 (a)	(a) The delayed to exceeding _____N/A___number of days. (b) The Tender price shall be adjusted by the following percentages of the tender price: (i) By _____N/A___% of t*he local currency portion of the Contract price adjusted to reflect local inflation during the period of extension,* *and* *(ii) By*_____ N/A _____*% the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.*
ITT 21.1	A Tender Security __ ***SHALL BE*** _____ required. A Tender-Securing Declaration _____***Shall not be***_____ required. If a Tender Security shall be required, the amount and currency of the Tender Security shall be ***KSHS. FIVE MILION ONLY (5,000,00.00)***
ITT 21.2 (d)	NOT APPLICABLE
ITT 21.5	On the Performance Security, other documents required shall be Unconditional Demand Bank Guarantee
ITT 22.1	In addition to the original of the Tender, the number of copies is: 1_____
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: written power of attorney drawn by commissioner of oaths and signed by the Directors providing the power of attorney.
D. Submission and Opening of Tenders	
ITT 24.1	(A) For Tender submission purposes only, the Procuring Entity's address is: The Director General, Kenya Rural Roads Authority, 3rd Floor, South Wing, Barabara Plaza Block B, Airport South Road, Along Mazao Road, Opp KCAA Building, JKIA P.O Box 48151 – 00100, Nairobi, Kenya. Tel: 020-8013846, 2710451, 2710464 Email: procurementhq@kerra.go.Ke; (4) Date and time for submission of Tenders shall be **30th June, 2026.** (5) Tenders **shall not submit** tenders electronically.
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of Tenders provided below: (1) Name of Procuring Entity, Kenya Rural Roads Authority (2) Physical address for the location (City, Street, Building, Floor Number and Room) Kenya Rural Roads Authority, 3rd Floor, South Wing, Barabara Plaza Block B, Airport South Road, Along Mazao Road, Opp KCAA Building, JKIA P.O Box 48151 – 00100, Nairobi, Kenya. Tel: 020-8013846, 2710451, 2710464 Email: procurementhq@Kerra.go.Ke; (3) State date and time of tender opening. **30th June, 2026 at 11am**

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 27.1	If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures *N/A* _____ _____
ITT 27.6	The number of representatives of the Procuring Entity to sign is All members of the opening committee.
E. Evaluation, and Comparison of Tenders	
ITT 32.3	The adjustment shall be based on the _____*Average* _____ *[insert "average" or "highest"]* price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.
ITT 35.2	The invitation to tender is extended to the following groups that qualify for Reservations _N/A_ *(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 groups qualify).*
ITT 36.1	At this time, the Procuring Entity *does not intend* to execute certain specific parts of the Works by subcontractors selected in advance.
ITT 36.2	Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: ___*40%_ of the total contract amount.* Tenderers planning to subcontract more than 10% of total volume of work shall specify, in the Form of Tender, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience.
ITT 36.3	*[Indicate N/A if not applicable]* The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: _____N/A_____ For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation.
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 51.1	The person named to be appointed as Adjudicator is as nominated by the Employer who is registered by the CIARB at an hourly fee of Shs.as provided by CIARB per day.
ITT 52.2	Other documents required are Form No. 9 Beneficial Ownership Disclosure Form.
ITT 54.1	The procedures for making a Procurement-related Complaints are detailed in the "Regulations" available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to: For the attention: *[Director General]* Title/position: *[Director General]* Procuring Entity: *[KeRRA]* Email address*: [procurementhq@kerra.go.ke]* In summary, a Procurement-related Complaint may challenge any of the following: (i) the terms of the Tender Documents; and (ii) the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. 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 be 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. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

A. PRELIMINARY EXAMINATION

Tenderers 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 below:

Table 1:

Item No.	Evaluation Criteria / Condition / Requirement Description	Clause Ref.	Requirement Priority
(A)	**PRELIMINARY EVALUATION CRITERIA**		
1)	Provide a **Tender Security** of **Kshs. 5,000,000.00** in the required format. The tender guarantee (security) will remain in force up to and including two hundred and Ten **(210)** days after the date of bid submission and including Thirty (30) days beyond the tender validity period {(210) days of the Tender Sub-Clause 20.1 of Instructions to Bidder. ***a)*** **A *bank guarantee;*** ***b) A guarantee by an insurance company registered and licensed by the insurance regulatory authority listed by the authority; or*** **c)** ***A guarantee issued by a financial institution approved and licensed by the central bank of Kenya, from a reputable source, and an eligible country.***	ITT 19.0 ITT 11.1(c) TDS ITP 11.1 (h) – (5) SECTION III A-(5**)**	**Must be submitted**
2)	*A) Properly and dully filled, signed and stamped* ***form of bid*** *and* ***appendix to form of bid*** *by the authorized person through the power of attorney. with a bid validity two hundred and Ten* ***(210)*** *days, from the specified date of bid opening.* *In addition:* *B) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.* *C) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.* ***a) Properly and dully filled, signed and stamped Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.*** ***b) Properly and dully filled, signed and stamped Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.*** ***c) Properly and dully filled, signed and stamped Self-Declaration of the Tenderer– to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.*** ***d) Properly and dully filled, signed and stamped Declaration and commitment to the Code of Ethics for Persons***	ITT 19.1 ITT 11.1(a) TDS ITP 11.1 (h) – (9) SECTION III EQC A-(11**)**	**Must be submitted**

Item No.	Evaluation Criteria / Condition / Requirement Description		Clause Ref.	Requirement Priority
	Participating in Public Procurement and Asset Disposal 2015. *D) Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender*			
3)	Certified Certificate of Incorporation issued by Registrar of Companies.		ITT 36 ITT 11.1(a) TDS ITP 11.1 (h) – (1) SECTION III EQC A-(1**)**	**Must be submitted**
4)	Current Certified CR12 Certificate (dated within 6 Months before date of opening) from the Registrar of Companies. This should be provided with Identification Documents of Directors and all individuals listed on the CR12. (ID or Passport). For Corporate Directors, CR12 or its equivalent for the corporate directors, Identification Documents for the corporate Director and its directors MUST be provided.		TDS ITP 11.1 (h) – (2) SECTION III EQC A-(2**)**	**Must be submitted**
5)	Valid certified Current Single Business permit		TDS ITP 11.1 (h) – (3) SECTION III EQC A-(3**)**	**Must be submitted**
6)	Valid Tax Compliance Certificate.		ITT 4.14 TDS ITP 11.1 (h) – (4) SECTION III EQC A-(4**)**	**Must be submitted**
7)	Current Certificate of Registration with National Construction Authority in the Category **"NCA 1" together** with a valid NCA practicing license		ITT 3.12 TDS ITP 11.1 (h) – (6) SECTION III EQC A-(6**)**	**Must be submitted**
8)	Pre-Tender Site Visit Certificate duly endorsed by the Authorized KeRRA Staff.		ITT 7 SECTION III EQC A-(13**)**	**Must be submitted**
9)	Submit a written power of attorney authorizing the signatory of the bid to commit the Bidder Witnessed by a Commissioner of Oaths.		ITT 20.4 TDS ITP 11.1 (h) – (8) SECTION III EQC A-(7**)**	**Must be submitted**
10)	Chronological Serialization of all the pages of the tender document (this should be sequential in the format of1,2,3,4,5…….) from the first page to the last page.		ITT 12.1 TDS ITP 11.1 (h) – (11) SECTION III EQC A-(14**)**	**Must be Serialized**
11)	The Tender submission **SHALL** be as follows: a) One Original clearly marked "**ORIGINAL**", b) One hard copy CLEARLY marked "**COPY**"		ITT 20.1	**Must be submitted**
12)	Provide Properly and dully filled, signed and stamped proof of Eligible Goods, Equipment, and Services *(Bidders to demonstrate that Goods, equipment and services to be supplied under the contract to have their origin in any country that is not determined ineligible under ITT 4.1*).		ITT 4.1 SECTION III EQC A-(18**)**	**Must be submitted**
13)	Provide a Properly and dully filled, signed and stamped proof of having not been declared ineligible by the PPRA as described in ITT 3.7		ITT 3.7 SECTION III EQC A-(20**)**	**Must be submitted**
14)	Submission of Audited Accounts or equivalent acceptable to the Employer, for the last three [3] years (2023, 2024 & 2025) to demonstrate: the current soundness of the applicant's financial position and its prospective long-term profitability, and capacity to have a cash flow amount, turnover and working capital (attach valid license of the auditor from ICPAK),		SECTION III EQC A-(19**)**	**Must be submitted**
15)	Provide a Properly and dully filled, signed and stamped **Bill of Quantities (any alterations should be countersigned by the authorized person)**		ITT 11.1 (b) SECTION III EQC A-(9**)**	**Must be Filled**
16)	Provide a Properly and dully filled, signed and stamped**, the following schedules of supplementary information.** **NOTE:** *That bidders should not alter the format of any of the forms under this section. Any alteration shall lead to disqualification of the bid*		ITT 17.0 SECTION IV EQC - **(9)**	
1)	FORM 1 FT:	Properly and dully filled, signed and stamped form of foreign tenderers 40% rule (*for foreign tenderers*)	ITT 3.10; ITT 17.0 SECTION IV EQC -(1) SECTION IIIA EQC –(17) & (9)	**N/A**
2)	FORM 2 EQU:	Properly and dully filled, signed and stamped form of Equipment (*A separate Form shall be prepared for each item of equipment listed, or for alternative equipment*	ITT 16; ITT 17.0 SECTION IV EQC -(4) SECTION IIIA EQC	**Must be Filled**

Item No.	Evaluation Criteria / Condition / Requirement Description		Clause Ref.	Requirement Priority
		proposed by the Tenderer)	–(23) & (9)	
3)	FORM 3 PER:	Properly and dully filled, signed and stamped 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 separately for each personnel/ candidate; with declaration for both parties; data on their experience should be provided*).	ITT 6.9; ITT 17.0 SECTION IV EQC -(5) SECTION IIIA EQC –(9)	**Must be Filled**
4)	FORM 4:	Properly and dully filled, signed and stamped form of tenderers qualification without pre-qualification. **FORM ELI-1.1 (*Properly and dully filled, signed and stamped form of Tenderer Information*)** Attach copies of original documents of [check the box(es) of the attached original documents] 1) 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 4.4. 2) A current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority, if tender s a Kenyan tenderer, in accordance with ITT 4.15. 3) In case of state-owned enterprise or institution, in accordance with ITT 4.6 documents establishing: Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.	ITT 17.0 SECTION IIIA EQC –(9)	**Must be Filled**
5)	FORM ELI-1.1	Properly and dully filled, signed and stamped form of Tenderer Information	ITT 17.0 SECTION IV EQC -(6.1) SECTION IIIA EQC –(9)	**Must be Filled**
6)	FORM ELI-1.2	Properly and dully filled, signed and stamped of Tenderer's JV Information Form *(to be completed for each member of Tenderer's JV)*	ITT 17.0; ITT 3.1 SECTION IV EQC -(6.2) SECTION IIIA EQC –(9)	**Must be Filled**
7)	FORM CON– 2	Properly and dully filled, signed and stamped form of Historical Contract Non-Performance, Pending Litigation and Litigation History	ITT 17.0 SECTION IV EQC -(6.3) SECTION IIIA EQC –(9)	**Must be Filled**
8)	FORM FIN –3.1	Properly and dully filled, signed and stamped of Financial Situation and Performance Properly and dully filled, signed and stamped form of Sources of Finance Properly and dully filled, signed and stamped form of financial documents	ITT 17.0 SECTION IV EQC -(6.4) SECTION IIIA EQC –(9) & (19)	**Must be Filled**
9)	FORM FIN – 3.2	Properly and dully filled, signed and stamped form of Average Annual Construction Turnover	ITT 17.0 SECTION IV EQC -(6.5) SECTION IIIA EQC –(9) & (19)	**Must be Filled**
10)	FORM FIN –3.3	Properly and dully filled, signed and stamped form of Financial Resources	ITT 17.0 SECTION IV EQC -(6.6) SECTION IIIA EQC –(9) & (19)	**Must be Filled**
11)	FORM FIN-3.4	Properly and dully filled, signed and stamped form of Current Contract Commitments / Works in Progress	ITT 17.0 SECTION IV EQC -(6.7) SECTION IIIA EQC –(9) & (21)	**Must be Filled**
12)	FORM EXP-4.1	Properly and dully filled, signed and stamped form of General Construction Experience	ITT 17.0 SECTION IV EQC -(6.8) SECTION IIIA EQC –(9)	**Must be Filled**
13)	FORM EXP - 4.2(a)	Properly and dully filled, signed and stamped of Specific Construction and Contract Management Experience.	ITT 17.0 SECTION IV EQC -(6.9) SECTION IIIA EQC –(9) & (22)	**Must be Filled**
14)	FORM EXP - 4.2(b)	Properly and dully filled, signed and stamped form of Construction Experience in Key Activities (*All Sub-contractors for key activities must complete the*	ITT 17.0; ITT 34 SECTION IV EQC -(6.10)	**Must be Filled**

Item No.	Evaluation Criteria / Condition / Requirement Description		Clause Ref.	Requirement Priority
		information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.)	SECTION IIIA EQC – (9)	
15)	FORM SD1:	Properly and dully filled, signed and stamped form of Self-declaration that the person/tenderer is not debarred in the matter of the public procurement and asset disposal act 2015.	ITT 17.0; ITT 2.1; ITT 3.7; SECTION IIIA EQC – (9)	**Must be Filled**
16)		Must submit duly filled signed and stamped APPENDIX 1 form of -fraud and corruption must be attached *(Appendix 1 shall not be modified).*	ITT 17.0; ITT 2.1; SECTION IIIA EQC – (9)	**Must be Submitted**
B) DETAILED EVALUATION CRITERIA				
(i) TECHNICAL & FINANCIAL CAPACITY EVALUATION CRITERIA				
Technical Evaluation Criteria will be as per Table 3 & 4 given below. Tenders that do not pass the Technical & Financial Capacity Examination will be considered non- responsive and will not be considered further.				
C) MARGIN OF PREFERENCE AND RESERVATIONS				
17	Procuring Entity will grant a margin of preference in accordance to Clause 147 and 148 respectively of the PPADR 2020 citizen contractor registered outside Kenya shall only be eligible to benefit from the preferences and reservations scheme when bidding in international tendering and competition. For international/Open Tenders, a margin of preference shall be applied as follows: -		ITT 33	**Must be Submitted**
	Group A:	Ten percent (10%) margin of preference of the evaluated price of the tender, where the percentage of shareholding of Kenyan citizens is more than fifty percent (50%);		
	Group B:	Eight percent (8%) margin of preference of the evaluated price of the tender, where the percentage of shareholding of Kenyan citizens is less than fifty percent (50%) but above twenty percent (20%); and		
	Group C:	Six percent (6%) margin of preference of the evaluated price of the tender, where percentage of shareholding of Kenyan citizens is above five percent (5%) and less than twenty percent (20%).		
D) ERROR CHECK				
17)	✓ 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. ✓ Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis:		ITT 31	**Must be Submitted**
	A. Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.			
	B. Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and			
	C. If there is a discrepancy between words and figures, the amount in words shall prevail			
	D. Abnormally low tenders, abnormally high tenders or any other indications of potential bid rigging practices, and tenders that are front loaded.			
E) POST QUALIFICATION AND CONTRACT AWARD				
	A. 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 **as per the provisions of the Qualification Criteria Matrix in Table 3 below**		ITT 39	**Must Meet with Supporting Evidence**
	B. Minimum average annual turnover as per the provisions of the Qualification Criteria Matrix in Table 3 below.			
	C. Specific experience requirement as per the provisions of the Qualification Criteria Matrix in Table 3 below.			

Table 3: Technical & Financial Capacity Evaluation

Qualification Criteria				Compliance Requirements			Documentation
				Joint Venture			
No.	**Subject**	**Requirement**	**Single Entity**	**All Parties Combined**	**Each Party**	**One Party**	**Submission Requirements**
1. Historical Contract Non-Performance							
1.1	History of Non-Performing Contracts	Non-performance of a contract did not occur within the last five (5) years prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the applicant have been exhausted.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Form CON-2
1.2	Pending Litigation	All pending litigation shall in total not represent more than thirty percent (30%) of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Form CON-2
2. Financial Situation							
2.1	Financial Performance	Submission of audited accounts or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last Three [3] years to demonstrate: (a) the current soundness of the applicants' financial position and its prospective long-term profitability, and (b) capacity to have a cash flow amount of min. **KShs 69,100,000.00** equivalent working capital	Must meet requirement (a) Must meet requirement (b) Must meet requirement	N / A (a) N / A (b) Must meet requirement	Must meet requirement (a) Must meet requirement (b) N / A	N / A (a)N / A (b) N / A	Form FIN - 3.1, with Supporting Evidence
2.2	Average Annual	Minimum average annual turnover ***Kshs. 2,000,000,000.00***	Must meet	Must meet requirement	Must meet ((100-	N/A	Form FIN - 3.2 with Supporting

Qualification Criteria				Compliance Requirements			Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
	Turnover		requirement		50)/ (n-1)) % of the requirement where n= number of joint venture members		Evidence
3. Experience							
3.1	General Construction Experience	Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last Ten (10) years prior to the applications submission deadline	Must meet requirement	N / A	Must meet requirement	N / A	**4.** Form EXP - 4.1 **Experience**
3.2 (a)	Specific Construction Experience	Participation as contractor, management contractor or subcontractor, in at most **Two (2) contracts** with a cumulative value of at least **KShs. 2.0 Billion** within the last **Ten (10) Years** that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics as described in the Scope of Works) For subcontracted Works the Bidder should provide the following: ▪ Award letter of the Main Contractor ▪ Award letter of the subcontract ▪ Completion letter of the Subcontract Proof of payment (attach payment certificates and certified bank statements indicating proof of payment)	Must meet requirement	Must meet requirement	N / A	Must meet requirement	FormEXP. 4.2(a) Must Provide Supporting Evidence (Completion Certificate & Award Letter)

Qualification Criteria				Compliance Requirements			Documentation
				Joint Venture			
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Party	One Party	Submission Requirements
3.2 (b)		b) For the above or other contracts executed during the period stipulated in 4.2(a) above, a minimum construction experience in at least one (1) of: - New construction of bridges and approach roads - Other similar road works (gravel, concrete paving blocks or concrete etc.)	Must meet requirements	Must meet requirement	N / A	Must meet requirement	Must Provide Supporting Evidence
3.3 (c)	Value of Current Contract Commitments / Works in Progress with the Procuring Organization	c) The value of pending works with the procuring entity SHALL not exceed **N/A**	N/A	N/A	N/A	N/A	As filled in FORM FIN-3.4
4. Work Methodology							
4.1	Work Methodology	Submission of a work methodology	Should demonstrate understanding of the scope of works and other general requirements	Should demonstrate understanding of the scope of works and other general requirement	N/A	N/A	Must Submit
5. Site Staff							
	The site staff shall possess minimum levels set below;						
5.1	Site Agent	Qualification = Degree in Civil Eng. General Registered Professional Engineer with EBK General Experience= 5yrs, Specific Experience = 3 Yrs	Must meet requirements	Must meet requirement	N/A	N/A	Must Provide Supporting Evidence (Signed CV & Certified Certificates/ Testimonials)
5.2	Senior Foreman	Qualification =Diploma in Civil Eng. General Experience = 5 yrs, Specific Experience = 3 Yrs	Must meet requirements	Must meet requirement	N/A	N/A	Must Provide Supporting Evidence (Signed CV & Certified Certificates/ Testimonials)

Qualification Criteria				Compliance Requirements			Documentation
				Joint Venture			
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Party	One Party	Submission Requirements
5.3	Site Surveyor	Qualification = Degree in Surveying General Experience = 3 yrs Specific Experience = 2 Yrs	Must meet requirements	Must meet requirement	N/A	N/A	Must Provide Supporting Evidence (Signed CV & Certified Certificates/ Testimonials)
6. Key Equipment							
6.1	Contractors must meet requirements on key equipment as listed in table 4 below;						Must Provide Supporting Evidence (Logbooks, Lease Agreements with Supporting Logbooks)

Table 4: Equipment Holding

Contractors must meet requirements on key equipment as listed below;

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract
A) General plant		
	1.Primary/Secondary/Crusher Unit/Power Screen Min capacity 60/hr	0
	2. Concrete batching plant Min Cap 20m3/hr	0
	Subtotal for A	
B) Bituminous Plants		
	1. Bitumen pressure distributor	1
	2. Bitumen heater tank (10,000 litres)	Optional
	3. Asphalt plant	Optional
	4. Paver	1
	5. Chip's spreader	1
	Subtotal for B	3
C) Compactors		
	1.Vibrating compaction plate 300mm wide	-
	2.Vibrating compaction plate 600mm wide	1
	Subtotal for C	1
D) Mobile Compressors		
	1. Medium rock drill (1.5 m3/min)	Optional
	2. Heavy rock drill (1.5 m3/min)	Optional
	Subtotal for D	
E) Concrete Equipment		
	1. Mobile concrete mixers	1
	2. Truck mounted mixers	Optional
	Subtotal for E	1
F) Transport (Tippers, dumpers, water tankers)		
	1. 4x2 tippers payload 7-12 tonnes	3
	2. 6x4 tippers payload 16-20 tonnes	4
	3. Articulated trailers (low loaders)	Optional
	4. Dump trucks	1
	5. Flatbed lorries	Optional
	6. Water tankers (18,000- 20,000 lts capacity)	1
	7. Water tankers (8,000- 10,000 lts capacity)	Optional
	Subtotal for F	9
G) Earth moving equipment		
	1. Tractor dozers with dozer attachment (D6-D9)	Optional
	2. Tracked loaders	Optional
	3. Wheel loaders	1
	4. Motor scrappers	Optional
	5. Motor graders (93-205KW)	1
	6. Trench excavators	Optional
	Subtotal for G	2
H) Diesel Generators		
	1. Diesel generators (15- 200KVa)	Optional
	Subtotal H	-
I) Excavators		
	1. Hydraulic crawler mounted (7-10	1

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract
	tonnes) – 0.25-0.4m3 SAE bucket	
	2. Hydraulic wheel mounted (10-16 tonnes) – 0.4- 0.6m3 SAE bucket	Optional
	Subtotal for I	1
J) Rollers		
	1. Self-propelled single drum vibrating (various types, 12 tonnes and above)	1
	2. Pneumatic rubber tyre (1- 2 tonnes/wheel)	1
	3. Sheep foot roller	Optional
	4. Double drum vibrating pedestrian roller	1
	Subtotal for J	3
K) Stabilization		
	1. Pulvimixer	1
	Subtotal for K	1

QUALIFICATION FORMS

1. FORM EQU: EQUIPMENT

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

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment o Owned o Rented o Leased o Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

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

2. FORM PER -1

Contractor's Representative and Key Personnel Schedule

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

Contractor' Representative and Key Personnel

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

3. FORM PER-2:

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

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

Name of Tenderer

Position [*#1*]: [*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**
[main project details]	*[role and responsibilities on the project]*	*[time in role]*	*[describe the experience relevant to this position]*

Declaration

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

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

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

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

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

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

Signature: _____

Date: (day month year): _____ Countersignature

of authorized representative of the Tenderer:

Signature: _____ Date: (day month

year): _____

4. TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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

4.1 FORM ELI -1.1

Tenderer Information Form

Date: _____

ITT No. and title: _____

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: *[indicate country of Constitution]*
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 ☐ In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart and a list of Board of Directors.

4.2 FORM ELI -1.2

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

ITT No. and title: _____

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8. 2. Included are the organizational chart and a list of Board of Directors.

4.3 FORM CON – 2

Historical Contract Non-Performance, Pending Litigation and Litigation History

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

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐ Contract non-performance did not occur since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1. ☐ Contract(s) not performed since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	**Non- performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3. ☐ Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.			

Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)**
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: ____ Status of dispute: _____	
		Contract Identification: Name of Procuring Entity: Address of Procuring Entity: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. ☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
Year of award	**Outcome as percentage of Net Worth**	**Contract Identification**	**Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)**

[insert year]	*[insert percentage]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Procuring Entity" or "Contractor"]* Reason(s) for Litigation and award decision *[indicate main reason(s)]*	*[insert amount]*

4.4 FORM FIN – 3.1:

Financial Situation and Performance

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

4.4.1. Financial Data

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

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**
Cash Flow from Operating Activities					

*Refer to ITT 15 for the exchange rate

4.4.2 Sources of Finance

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

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

4.4.3 Financial documents

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

(a) reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).

(b) be independently audited or certified in accordance with local legislation.

(c) be complete, including all notes to the financial statements.

(d) correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[1] for the _____years required above; and complying with the requirements

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

4.5 FORM FIN – 3.2:

Average Annual Construction Turnover

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

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

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

4.6 FORM FIN – 3.3:

Financial Resources

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

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

4.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

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

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

4.8 FORM EXP - 4.1

General Construction Experience

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

Page _____of _____pages

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

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

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

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

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

Specific Construction and Contract Management Experience (cont.)

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

4.11 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____
Date: _____
Tenderer's JV Member Name: _____
Sub-contractor's Name[2] (as per ITT 34): _____
ITT No. and title: _____

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

1. Key Activity No One: _

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

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

[2] If applicable

2. Activity No. Two
3. ……

OTHER FORMS

5. FORM OF TENDER
(Amended and issued pursuant to PPRA CIRCULAR No. ¨xxxxxx)

INSTRUCTIONS TO TENDERERS

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

ii) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.

iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (s) below.

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

Tender Name and Identification:.....*[insert identification]*

Alternative No.:.....*[insert identification No if this is a Tender for an alternative]*

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

Dear Sirs,

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

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

   The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.

3. We agree to adhere by this tender until_____*[Insert date],* and it shall remain binding upon us and may be accepted at any time before that date.

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.

5. We, the undersigned, further declare that:
   i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
   ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
   iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
   iv) Conformity: We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works];*

v) *Tender Price:* The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*

vi Option 1, in case of one lot: Total price is: [*insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies*]; Or

Option 2, in case of multiple lots:

a) Total price of each lot [*insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies*]; and

b) Total price of all lots (sum of all lots) [*insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies*];

vii) *Discounts:* The discounts offered and the methodology for their application are:

viii) The discounts offered are: [*Specify in detail each discount offered.*]

ix) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];

x) *Tender Validity Period:* Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

xi) *Performance Security:* If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;

xii) *One Tender Per Tender:* We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;

xiii) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, Project Manager, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.

xiv) *State-owned enterprise or institution:* [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements of ITT 3.8*];

xv) *Commissions, gratuities, fees:* We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

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

xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;

xviii) Fraud and Corruption: We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the "Certificate of Independent Tender Determination" attached below.

xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from_____(*specify website*) during the procurement process and the execution of any resulting contract.

xxi) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.

xxii) We, the Tenderer, have duly completed, signed and stamped the following Forms as part of our Tender:

a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
c) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

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

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

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

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

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

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

Date signed_____day of_____, _____

Notes
** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer*
*** Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

A. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

Instruction to Tenderer

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

(a) **Tenderer's details**

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

General and Specific Details

b) Sole Proprietor, provide the following details.

Name in full_____Age_____ Nationality _____Country of Origin_____ Citizenship _____

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) Registered Company, provide the following details.

i) Private or public Company_____

ii) State the nominal and issued capital of the Company_____

Nominal Kenya Shillings (Equivalent)..... Issued

Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

(e) DISCLOSURE OF INTEREST- Interest of the Firm in 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.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process.		

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

f) Certification

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

Full Name_____ Title or

Designation_____

_____ _____

(Signature) *(Date)*

B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

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

I certify, on behalf of_____[Name of Tenderer] that:

1. I have read and I understand the contents of this Certificate;

2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;

4. For the purposes of this Certificate and the Tender, I understand that the word "competitor" shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
   a) has been requested to submit a Tender in response to this request for tenders;
   b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;

5. The Tenderer discloses that [check one of the following, as applicable:
   a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
   b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;

6. In particular, without limiting the generality of paragraphs (5)(a) or (5)(b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   a) prices;
   b) methods, factors or formulas used to calculate prices;
   c) the intention or decision to submit, or not to submit, a tender; or
   d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5)(b) above;

7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5)(b) above;

8. the terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5)(b) above.

Name_____ Title__ Date _____

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

C. SELF - DECLARATION FORMS

FORM SD1

SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENTAND ASSET DISPOSALACT 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 PERSON/TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

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

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

2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ……... *(insert name of the Procuring entity)* which is the procuring entity.

3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ……. (name of the procuring entity)

4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender

5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

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

Bidder's Official Stamp

DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

I ……..……. (person) on behalf of *(Name of the Business/ Company/Firm*) ……. declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

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

Name of Authorized signatory……..... Sign…….....

Position…….....…….....

Office address……. Telephone…….....…….

E-mail…….....….....…

Name of the Firm/Company…….....……

Date…….....…. (Company Seal/ Rubber

Stamp where applicable)

Witness

Name ……..... Sign.....

Date……

D. APPENDIX 1- FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

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

3. Requirements

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

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

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
2) A person referred to under subsection (1) who contravenes the provisions of that 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 direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

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

a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
   i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
   ii) "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

v) "obstructive practice" is:

- deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
- acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.

b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

"fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.

c) Rejects a proposal for award[1] of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

d) Pursuant to the Kenya's above stated Acts and Regulations, may 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 inspect[2] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

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

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[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.*

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

Beneficiary:_____

Request forTenders No:_____

Date:_____

TENDER GUARANTEE No.:_____

Guarantor: _____

1. We have been informed that_____(here inafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here inafter called" the Tender") for the execution of_____ under Request for Tenders No._____(“the ITT”).

2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.

3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

(a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Applicant; or

b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.

5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above onor before that date.

_____

[signature(s)]

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

FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

1. Whereas …… [*Name of the tenderer]* (hereinafter called "the tenderer") has submitted its tender dated …… [*Date of submission of tender]* for the …… *[Name and/or description of the tender]* (hereinafter called "the Tender") for the execution of_____under Request for Tenders No._____("the ITT").

2. KNOW ALL PEOPLE by these presents that WE …… of …… [**Name of Insurance Company**] having our registered office at …… (hereinafter called "the Guarantor"), are bound unto …….. [*Name of Procuring Entity*] (hereinafter called "the Procuring Entity") in the sum of …… (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

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

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

   a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Principal; or

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

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

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii)twenty-eight days after the end of the Tender Validity Period.

5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

_____	_____
[Date]	*[Signature of the Guarantor]*
_____	_____
[Witness]	*[Seal]*

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

TENDER-SECURING DECLARATION FORM

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

Date:.....*[insert date (as day, month and year) of Tender Submission]*
Tender No.:.....*[insert number of tendering process]*
To:..... *[insert complete name of Purchaser]* I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.

2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.

3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
   a) our receipt of a copy of your notification of the name of the successful Tenderer; or
   b) thirty days after the expiration of our Tender.

4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:……..……....….. Capacity / title (director or partner or sole proprietor, etc.) …….…….....……. Name: …….. Duly authorized to sign the bid for and on behalf of: *[insert complete name of Tenderer]*

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

Appendix to Tender

Schedule of Currency requirements

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

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

PART II - WORK REQUIREMENTS

SECTION VI - SPECIFICATIONS

SECTION 1 – GENERAL

100 SPECIAL SPECIFICATIONS

Special specification is supplementary to the Standard Specifications and the two must be read in conjunction. In any case where there appears to be conflict between the two, then the Special Specifications will take precedence.

101 LOCATION OF THE PROJECT

The project road is in Nyando and Nyakach constituencies, Kisumu County:

S/No	LINK NAME	LENGTH (KM)
1.	Katito – Awasi Road	19
TOTAL		**19**

102 EXTENT OF CONTRACT

The major works to be executed under the Contract comprise mainly of but are not limited to the following:

1. Provision of facilities to the supervising Engineers.
2. Site clearance; stripping & grubbing.
3. Earthworks.
4. Construction of 300mm improved subgrade to extend to shoulders.
5. Construction of ***150mm*** Cement/Lime improved gravel sub-base of minimum CBR 60 % (CIG 60) on carriageway and shoulders.
6. Construction of ***150mm*** Cement/Lime improved gravel base of minimum CBR of 160% (CIG 160) on carriageway and shoulders.
7. Provision of surface dressing for first seal using 10/14mm chippings on the carriageway and shoulders as instructed by the Engineer.
8. Construction of Asphalt Concrete wearing course Type II on the carriageway and shoulders as instructed by the Engineer.
9. Construction of Asphalt Concrete wearing course Type I for Construction of Rumble Strips and Bumps.
10. The carriageway shall be ***6m*** wide with shoulders of **1m** either side, constructed with the material and thickness for sub-base and base as above.
11. Construction of standard pipe culverts, span
12. Construction of 3 No. box culverts and 2 No. Bridges of 20m and 15m spans.
13. Improvement of other drainage and soil erosion protection works along the road corridor.
14. Relocation of services as necessary.
15. Installation of road furniture.
16. Maintenance of passage of traffic through and around the works.
17. Implementation of the Environmental, HIV/AIDS, and COVID-19 mitigation measures and other cross cutting issues as directed by the Engineer.
18. Any other activity not listed above in either category but deemed to be necessary by the Engineer, shall be subject to the Engineer's formal instructions and within the mode of payment stipulated either by day-works or on a measured basis.

104 PROGRAMME OF EXECUTION OF THE WORKS

The Contractor shall provide the works programme, required under clause 14 of the Conditions of Contract, within 21 days of receipt of the Engineer's Order to commence work.

The programme shall be coordinated with climatic and other conditions to provide for the completion of the works in the order and by the time specified.

The 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 obligation to complete the works in the prescribed order and 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 fulfil his obligations.

105 ORDER OF EXECUTION OF WORKS

In addition to Clause 105 of the Standard Specification the Contractor shall carry out the Works such that a continuous and consecutive output of fully completed work is achieved.

107 TAKING OVER CERTIFICATE

The minimum portion of works for which a taking over certificate will be issued upon completion of each of the following links;

S/No	LINK NAME	LENGTH (KM)
1.	Katito – Awasi Road	19
TOTAL		**19**

108 METHOD OF CONSTRUCTION AND HOURS OF ATTENDANCE BY THE ENGINEER'S REPRESENTATIVE

At the commencement of the contract the Contractor will submit in writing to the Engineer, the hours which shall be considered normal working hours, together with the day of the week to be set aside for rest. When approved these shall be maintained throughout the continuance of the Contract.

Notwithstanding the provision of the last paragraph of clause 108 of the Standard Specification, the Engineer's Representative normal working hours shall be 8 hours from Monday to Friday and 5 hours on Saturday with Sunday set aside for rest.

If the Contractor wishes to execute permanent works outside these hours, he shall meet any extra costs arising thereof in addition to giving a day's notice in writing.

109 NOTICE OF OPERATIONS

Notification Terms

It shall be the Contractor's responsibility to notify the Engineer when any item of works scheduled are completed and ready for approval, and the Contractor shall give sufficient notice to allow control test to be performed.

Explosive and Blasting

a) The requirements of the Laws of Kenya governing explosives and other requirements and regulations of Government of Kenya and other authorities shall be complied with.

b) No explosives of any kind shall be used without prior written consent of the Engineer.
c) The Contractor shall be solely responsible for the provision, handling, and storage and transporting of all explosives, ancillary materials and all other items of related kind whatsoever required for blasting.

117 HEALTH SAFETY AND ACCIDENTS

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 during the duration of the Contract, a fully equipped dispensary. This shall be with a qualified Clinical Officer / Nurse who shall offer the necessary medical advice on COVID-19, HIV/AIDS and related diseases to the Engineer's and Contractor's Site staff. The Contractor shall allow for this in the rates and be responsible for all site welfare arrangements at his own cost.

The contractor shall take an active role in civic and public health education for his employees and the community in general. To this end, he shall liaise with the regional office of the Ministry of Health with respect to drawing up and carrying out COVID-19 and HIV/AIDS awareness programmes and testing campaigns for his staff, and initiate and coordinate these as detailed in Clause 143 of the Specifications.

Bill No. 25 is included in the Bills of Quantities for COVID-19 & HIV/AIDS awareness/ counselling/testing activities. The Contractor shall in consultation with regional service providers from the Ministry of Health, develop and include in his tender a COVID-19 mitigation measures, HIV/AIDS awareness, testing programmes and cost estimates for approval by the Supervisor, to be funded under this item.

The Contractor shall allow the dissemination and appropriate intervention and remedial measures to curb the spread of COVID-19 pandemic & HIV/AIDS scourge within his camps. These measures will include making condoms readily available to all his staff.

The Contractor shall maintain records of health and safety and make reports concerning the health and safety of his employees as the Supervisor may from time to time prescribe. The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the site from insect nuisance, rats and other pests and reduce the dangers to health and the general nuisance occasioned by the same. The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the site an adequate supply of drinking and other water for the use of his staff and labour.

The Contractor shall allow in his prices and be responsible for the cost of all site welfare arrangements.

119 USE OF EXPLOSIVES

The Contractor shall ensure that he complies with the current Government regulations with regard to explosives. No explosives of any kind shall be used without prior consent of the Supervisor. The Contractor shall be solely responsible for the provision, handling, storage and transporting of all explosives, ancillary materials, and all other items of related kind whatsoever required for blasting.

120 PROTECTION OF EXISTING WORKS

The appropriate provisions of Section 1 of the Standard Specifications in regards to protection of existing works and services shall be adhered to in all respects.

The Contractor's attention is drawn to the fact that it is essential to maintain existing power,

telephone, water, sewage and other services throughout the Contract Period.

The Contractor shall give all assistance to Engineers of the Telkom Kenya, the Kenya Power and Lighting Co. Ltd., the Ministry of Water and other relevant authorities to maintain the serviceability of their installations.

123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS

The Contractor shall keep in close touch with the Police and the 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.

124 LAND FOR ALL CAMPSITES AND FOR THE CONTRACTOR'S OWN PURPOSES, INCLUDING TEMPORARY WORKS

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.

Notwithstanding Clause 120 of the Standard Specifications, the Contractor shall be required to appoint competent surveyors who will liaise with the Engineer on matters related to the demarcation of the existing road reserve, site measurements, removal and reinstatement of existing services.

126 MATERIAL AND MANUFACTURED ARTICLES

Notwithstanding the provision of clause 126 of the Standard Specification, the Contractor's attention is drawn to his obligation with regard to quality and delivery schedule of materials and goods obtained from suppliers. Should the Engineer at any time be dissatisfied with any goods and materials intended for use or used by the contractor upon the works, he shall be empowered to reject goods and materials and shall order that hey be replaced by others of acceptable quality. Any more work that may consequently have to be redone and the cost thereof of the new suppliers shall all be borne by the Contractor.

127 INFORMATION FROM EXPLORATORY BORING AND TEST PITS

Notwithstanding the provisions of clause 127 of the Standard Specification, the materials report if made available to bidders will not form part of the contract documents and will only be for information. The Engineer will not be responsible for the suitability of the borrow pits provided by him or shown on the drawings.

128 STORAGE OF MATERIALS

All materials shall be stored on Site in a manner approved by the Engineer and the Contractor shall carefully protect from the weather all work and materials which may be affected thereby.

129 TEST CERTIFICATES

When instructed by the Engineer the Contractor shall submit certificates of test from the suppliers of materials and goods required in connection with the works as the Engineer may require.

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 the tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

131 SIGNBOARDS

The Contractor shall provide and erect publicity signboards on the site as directed. The Engineer shall, as shown in the Drawings, direct the minimum dimensions of the boards. The boards shall be prepared, primed and painted cream and lettered in black. The boards shall be of stout construction, resistant to the effects of weather.

132 HOUSING ACCOMMODATION FOR THE RESIDENT ENGINEER AND HIS STAFF, OFFICE, AND LABORATORY INCLUDING FURNITURE

132.1 HOUSING ACCOMMODATION FOR THE ENGINEER'S SENIOR STAFF

The contractor shall provide rent for the Engineer's site staff. This staff will generally comprise the following;

Designation	Number
Resident Engineer	1
Assistant Resident Engineer	1
Materials Engineer	1
Site Surveyor	1
Senior Inspector	2
Senior Lab. Technologist	1
CAD Technician	1
Inspectors	2
Lab Technician	2
Chainmen	2
Lab Assists	2

Payment shall be as per the bills of quantities.

132.4 HOUSING ACCOMMODATION FOR THE ENGINEER'S JUNIOR STAFF

The Contractor shall provide rent for the Engineer's junior staff as appropriate.

132.7 ENGINEER'S OFFICE, FURNITURE, AND EQUIPMENT

The Contractor shall provide a furnished and equipped main office of plan area not smaller than 155 metre squares that is equivalent of the MOR Standard Resident Engineer's Office. This office shall be of weather-proof construction, provided with mosquito proof and burglar-proof windows and lockable doors and suitably insulated against heat and cold, all to the satisfaction of the Engineer. The room to be occupied by the Engineer's Representative and its front office shall be provided with a floor carpet to be approved by the Engineer. All other floors shall be given a PVC tile finish using approved adhesive including 150mm wood skirting or superior finish. The windows shall be fitted with curtains and blinders.

The office for the Resident Engineer shall be completely separate from that of the Contractor.

Latrines and washrooms graded to staff seniority, together with a drinkable water supply and waterborne sewage disposal shall be provided for the office. The Contractor shall also provide 24 hours a day security and electricity supply to the offices and shall allow for any water and electricity consumed and for any statutory charges associated.

The main office shall revert to the Contractor at the end of the project.

The Contractor may be instructed by the Engineer under clause 58 of the General Conditions of Contract to make payments of general receipted accounts for such items as stationery, stores, furniture and equipment, claims and allowances for supervision personnel and any miscellaneous claims or the Engineer may direct the Contractor to purchase or pay for the above. The Contractor will, on provision of receipts, be paid under appropriate bill items in the BOQ.

Further, the Contractor shall, as provided for in the Bills of Quantities provide and maintain the listed office furniture and equipment as specified in the Appendix to Bill item 1.03 of Bill of Quantities with a dealer's certificate and warranty accompanying the furniture and equipment.

All office furniture and equipment bought under the Contract shall revert to the Employer at the end of the project. Payment for provision of the office including the furniture shall be paid against the appropriate bill items in the BOQ.

132.8 ENGINEER'S LABORATORY AND SURVEY EQUIPMENT

The Contractor shall provide Engineer's laboratory as shown in the Book of Drawings and provide all the laboratory equipment, reagents and survey equipment as required by the Engineer. The Contractor shall be paid under appropriate bill items in the Bills of Quantities or on provision of receipts as required by the Engineer.

The Contractor may be directed to pay for stationery, equipment or reagents that are foresaid and also pay for servicing and repair of the laboratory equipment being used on the project.

The Contractor shall provide, install and maintain in a good state of repair, such laboratory, survey and other equipment as listed for the duration of the contract.

Such equipment shall be of approved manufacture, and shall be made available to the Engineer for the Engineer's exclusive use throughout the Contract, not later than three weeks after the Engineer's order to supply. All equipment shall be ready to use and complete to perform the tests. The equipment shall revert to the Employer on completion of the Contract. The laboratory shall revert to the Contractor at the end of the Contract.

Any delays to the Contractor or the Contractor's activities caused by the Engineer being unable to perform survey work, field or laboratory tests due to the Contractor's failure to supply and/or maintain the said equipment shall be deemed to have been caused entirely by the Contractor's own actions, and any consequences of such delays shall be interpreted as such.

The payment to comply with this requirement is provided in the Bill of Quantities and ownership of all equipment shall revert to the Employer after the completion of the Works.

Failure by the Contractor to provide or maintain the equipment shall make him responsible to bear all costs that may be incurred as a result of the Engineer's staff using alternative means of communication, including delays in supervision and approval of Works by the Engineer. List of Laboratory and Survey Equipment shall revert to the Employer at the end of the Contract.

The laboratory equipment shall be purpose-made for use in highways materials testing laboratories and shall comply with the relevant British (BS) or American (AASHTO) Standards.

Resident Engineer's Laboratory Furniture and Equipment

As listed in the Appendix to the bills of quantities.

Resident Engineer's Survey Equipment

As listed in the Appendix to the Bills of quantities.

Survey/Road Design/Bridge Design Software

Where provided for in the Appendix to the Bills of Quantities, the Contractor shall supply the software complete with 5 no. stand-alone user licenses for the duration of the project. The cost shall include supply, installation, maintenance and training of not more than 5 no. Engineer's staff.

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF

The Contractor shall engage qualified staff who shall be vetted by the Engineer for the purpose of this contract and ensure they are in his payroll all in accordance with labour laws of Kenya and meet all other statutory requirements. He shall also pay wages (including all overtime) and house all attendant staff to fulfil the requirements of Clause 137 of the Standard Specification. The number of staff required shall be as instructed by the Engineer. The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under appropriate items in the Bills of Quantities.

137.1 SUPERVISION STAFF WAGES AND ALLOWANCE

The Engineer shall submit to the Contractor or to the Employer monthly supervision staff wages and allowances for settlement as may be appropriate.

Where such submissions are done to the Employer, it shall be an independent supervision cost Interim Payment Certificate in accordance with the provisions of the Bill of Quantities.

Such certifications shall be devoid of any profits and overheads to the Contractor applicable to the respective bill items. Amounts payable shall be remitted directly to the project account and the Contractor notified accordingly. Payments of allowances and wages shall be subject to necessary statutory deductions by the Engineer and records forwarded to the Contractor for filing

138 VEHICLES AND DRIVERS FOR THE ENGINEER AND HIS STAFF AND METHOD OF PAYMENT

The Contractor shall, when instructed to do so, provide and maintain in good working condition the vehicles provided for in the Bills of Quantities for the exclusive use by the Engineer and his staff throughout the contract.

The Contractor shall insure comprehensively the vehicles for any licensed drivers and shall provide competent drivers during normal working hours and whenever required by the Engineer.

Should any vehicle supplied not be in road worthy condition, the Contractor shall provide an acceptable equivalent replacement vehicle until such time as the original vehicle is repaired to the satisfaction of the Engineer and returned for use.

Payment for the vehicles (up to 5,000km), shall be by vehicle months. Payment for mileage above 5,000km shall be made at a rate per kilometre. These payments shall be inclusive of all fuels, lubricants, servicing, insurance, maintenance, drivers and repairs. The rate shall include any overtime the drivers might be due or any other allowances in addition to the normal working hours. Payment shall be made under appropriate items in the Bills of Quantities.

The vehicles shall revert to the Contractor at the end of the contract. Where there is a provision in the BoQ for reversion to the Employer, such action shall be effected upon instruction by the Engineer and paid for under the corresponding bill item.

139 RECEIPTED ACCOUNTS

The Contractor maybe instructed by the Engineer to make payments of general miscellaneous accounts for such items as stationary, stores and equipment and miscellaneous supervision personnel and claims or the Engineer may direct the Contractor to purchase or pay for the above. The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under appropriate items in the Bills of Quantities.

139.1 Project Accounts

The Contractor shall open a dedicated project account in the name of the project to be operated by the Engineer. The account shall be for the purposes of handling any cash and payment expenses related to the project.

The Engineer shall file returns of expenses and receipts to the Contractor every month for the purposes of tax returns. The Contractor shall keep the project account alive throughout the contract period or as directed otherwise by the Engineer. At closure, the Engineer shall submit to the Contractor the Final Account statement as appropriate.

140 PAYMENT OF OVERTIME FOR ENGINEER'S JUNIOR STAFF

Delete this clause entirely and substitute with:

"If the Contractor wishes to execute permanent work outside the Supervisor's normal working hours, as stated in Clause 108 of the Special Specification, then the payment for the overtime for the Supervisor's Junior Staff shall be reimbursed in full by the Contractor to the Supervisor's Representative including 20% for administrative overheads

If the Contractor wishes to execute works on the regular basis outside the Supervisor's normal working hours (Clause 108) over a prolonged period, the Supervisor may, if he deems necessary, employ additional supervisory staff for which the required salaries including the percentage for administrative overheads shall be in full by the Contractor to the Supervisor's Representative and the Contractor shall provide the required adequate accommodation facilities for such staff at his own costs.

The Contractor shall not be reimbursed any of these costs."

141 MEASUREMENT AND PAYMENT

All measurements and payments shall be as per the Standard Specifications.

142 LIQUIDATED DAMAGES

The rate of Liquidated Damages shall be as indicated in the Appendix to Form of Bid.

144 COMPLIANCE WITH SPECIFICATIONS AND REMEDIAL WORK

All materials, plant, labour and workmanship in and connected with the execution of the works shall be the best of their respective kinds without regard to any trade terms and the Contractors shall comply to these and in other respects with the relevant clauses and shall carry out the contract in a proper and workmanlike manner and in strict accordance with the working drawings and instructions of the Supervisor.

When any part of the Works or any plant or material is found upon examination by the Supervisor not to conform to the requirements or is at any stage before final acceptance damaged so that it no longer conforms to the requirements of the Specifications, the Supervisor may order its complete removal and replacement, at the Contractor's expense, with satisfactory work, plant or material or he may permit the Contractor to apply remedial measures in order to make good any such defects or damage. The actual remedial measures taken shall at all times be entirely at the Contractor's own initiative, risk and cost, but subject to the Supervisor's approval regarding the details thereof.

In particular, remedial measures must ensure full compliance with the Specifications for the final product, shall not endanger or damage any other part of the Works and shall be carefully controlled and submitted to the Supervisor for examination when completed or at any intermediate stage as may be required.

For the guidance, an indication is given below of what would normally be required in the more common cases of defects or damage, but the Supervisor will in no way be bound to approve of or adhere to the measures given below as the actual remedial measures will be dictated by the circumstances of each particular case.

(a) Earthworks

i) Where a cut slope has been over excavated or under cut, backfilling will not normally be allowed and the entire slope may have to be re-trimmed to obtain a uniform slope.

ii) Where the floor of a cutting has been taken too deep, it will normally require backfilling and re-compacting with selected gravel in the case of soil or gravel excavations and with crushed stone material or suitably sized rock in the case of hard excavations. All necessary measures shall be taken to drain away ground water that may accumulate in backfilled sections.

iii) Excess widths of fills will have to be trimmed back.

iv) Where erosion has damaged the surface of cuts or fills, the damage shall be made good by backfilling with suitable material and re-trimming. In more serious cases, the slopes may have to be cut back and back-filled by benching and compacting to the required standard of compaction with suitable small equipment and then re-trimmed.

(b) Stabilising

Any sections failing to meet the requirements specified or damaged to the extent that they require breaking up and re-compaction will have to be re-stabilised with the type and quantity of stabilising agent ordered by the Supervisor. The Supervisor may also order that the layer be removed entirely and replaced with fresh material to be stabilised.

(c) Local Defects in Pavement Layers

Where remedial measures are taken to make good local defects, the length and width of the area to be repaired by machines shall be such as will be necessary to accommodate the full width of the machines used and a reasonable length to ensure effective operation.

The depth to which material will have to be removed will depend on the type of material. Gravel will require breaking up to a depth of at least 75mm and crushed stone will usually require breaking up over its full depth. Asphalt material will normally require removal for its full depth.

(d) Concrete

Concrete work will normally require the cutting back and complete removal of any weak or honeycombed sections and making good using special epoxy adhesives to bind fresh concrete to old concrete. Cracks when permitted to remain, shall be injected with suitable epoxy compounds and test cores drilled to test the efficiency of the injection process.

145 AVAILABILITY OF MATERIAL

The Contractor shall be responsible for obtaining all materials from any local or foreign source. The Contracting Authority shall not be liable for any additional costs due to shortage of materials.

The material located by the Contractor shall be subject to the approval of the Supervisor before use of the Works.

146 ENVIRONMENTAL QUALITY PROTECTION

This section shall cover the implementation of all the provisions covered in the NEMA Licenses and shall not whatsoever be limited to the items detailed below.

146.1 Landscape Preservation

The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the Contractor's construction operations and equipment. The edges of clearings and cuts through trees, shrubbery and vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Movement of crews and equipment within the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to grazing land, crops and other property.

(a) Reseeding and Replanting

Special reseeding or replanting will not be required under these specifications; however, on completion of the work, all non-permanent works shall be scarified and left in a condition that will facilitate natural re-vegetation, provide for proper drainage, and prevent erosion. All non-permanent works destruction, scarring, damage or defacing of the landscape resulting from the Contractor's operations shall be repaired, replanted, reseeded, or otherwise corrected as directed by the Supervisor and at the Contractor's expense.

The Contractor shall tend to grass and tree seedlings planted under this section for a period not less than half the project construction period to allow for them to take root.

(b) Construction Roads

The location, alignment and grade of construction roads shall be subject to approval of the Supervisor. When no longer required by the Contractor, construction roads shall be restored to the original contour and made impassable to vehicular traffic. The surfaces of such construction roads shall be scarified as needed to provide a condition which will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(c) Construction Facilities

The Contractor's camp, workshop, office, and any other construction facilities shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On completion of the Works, all storage and construction buildings, including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be re-graded, as required, so that all surfaces drain naturally, blend with the natural terrain and are left in a condition that will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(d) Blasting Precautions

The Contractor shall adopt precautions when using explosives which will prevent scattering of rocks, stumps, or other debris outside the work area and prevent damage to surrounding trees, shrubbery and vegetation.

146.2 Preservation of Trees and Shrubbery

(a) Preservation

All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the Contractor's construction operations and equipment.

Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting, excavating, dumping, chemical damage, or other operations; and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Supervisor. The removal of trees or shrubs will be permitted only after prior approval by the Supervisor.

The layout of the Contractor's construction facilities such as workshops, warehouses, storage areas and parking areas; location of access and haul routes; and operations in borrow and spoil areas shall be planned and conducted in such manner that all trees and shrubbery not approved for removal by the Supervisor shall be preserved and adequately protected from either direct and indirect damage by the Contractor's operations. Except in emergency cases or when otherwise approved by the Supervisor, trees shall not be used for anchorage. Where such use is approved, the trunk shall be wrapped with a sufficient thickness of approved protective material before any rope, cable or wire is placed.

(b) Repair of Treatment of Damage

The Contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term "injury" shall include, without limitation, bruising, scarring, tearing and breaking of roots, trunk or branches. All injured trees and shrubs shall be repaired or treated without delay, at the Contractor's expense. If damage occurs, the Supervisor will determine the method of repair or treatment to be used for the injured trees and shrubs as recommended by an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the Contractor. All repairs or treatment of injured trees shall be performed under the direction of an experienced horticulturist of a licensed tree surgeon provided by and at the expense of the Contractor.

Where tree climbing is necessary, the use of climbing spurs will not be permitted. If climbing is necessary, safety ropes will be required.

(c) Replacement

Trees or shrubs [hat, in the opinion of the Supervisor, are beyond saving shall be removed and replaced early in the next planting season. The replacements shall be the same species, or other approved species, and of the maximum size that is practicable to plant and sustain growth in the particular environment. Replacement trees and shrubs shall be guyed, watered and maintained for a period of 1 year. Any replacement tree or shrub that dies shall be removed and replaced as directed by the supervisor, with such replacements being maintained for a period of 1 year from the date of replacement.

146.3 Prevention of Water Pollution

(a) General

The Contractor's construction activities shall be performed by methods that will prevent entrance, or accidental spillage of solid matter, contaminants, debris and other pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oils, bitumen and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution.

(b) Dewatering

Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams of watercourses by construction of intercepting ditches, bypass channels, barriers,

setting ponds or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on-stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water of storm runoff or can in any way encroach upon the watercourse itself.

(c) Turbidity

Turbidity increases in a stream or other bodies of water that are caused by construction activities shall be limited to the increases above the natural turbidities permitted under the water quality standards prescribed for that stream or body of water. When necessary to perform required construction work in as stream channel, the prescribed turbidity limits may be

exceeded, as approved by the Supervisor, for the shortest practicable period required to complete such work.

This required construction work may include such work as diversion of a stream, construction or removal of cofferdams, specified earthwork in or adjacent to a stream channel, pile driving and construction of turbidity control structures. Mechanized equipment shall not be operated in flowing water except as necessary to construct crossings or to perform the required construction.

(d) Wastewater

Wastewater from aggregate processing, concrete batching or other construction operations shall not be allowed to enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel- filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates or other approved methods. Any such wastewater discharged into surface waters shall contain the least concentration of settleable material possible. For the purpose of these specifications, settleable material is defined as that material which will settle from the water by gravity during a t-hour quiescent detention period.

(e) Compliance with Laws and Regulations

The Contractor shall comply with applicable local laws, orders, regulations and water quality standards concerning the control and abatement of water pollution.

146.4 Abatement of Air Pollution

(a) The Contractor shall comply with applicable local laws and regulations concerning the prevention and control of air pollution.

(b) In the conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants. The emission of dust into the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregates, and the Contractor shall use such methods and equipment as are necessary for the collection and disposal, or prevention, of dust during these operations. The Contractor’s methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.

(c) Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until corrective repairs or adjustments are made.

(d) Burning of materials resulting from clearing of trees and bush, combustible construction materials, and rubbish will be permitted only when atmospheric conditions for burning are considered favourable and when authorized by appropriate local air pollution or fire authorities. In lieu of burning, such combustible materials may be disposed of by other methods as provided in Clause 145.9. Where open burning is permitted, the burn piles shall be properly constructed to minimize smoke. In no case shall unapproved materials, such as tyres, plastics, rubber products, asphalt products, or other materials that create heavy black smoke or nuisance odours, be burned.

(e) Storage and handling of flammable or combustible materials, provisions for fire prevention, and control of dust resulting from drilling operations shall be in accordance with the applicable provisions of construction industry safety standards.

(f) Dust nuisance resulting from construction activities shall be prevented in accordance with Clause 145.5.

146.5 Dust Abatement

During the performance of the work required by these specifications or any operations appurtenant thereto, whether on right-of-way provided by the Contracting Authority or elsewhere, the Contractor shall furnish all the labour, equipment, materials, and means required, and shall carry out proper and efficient measures, wherever and as often as necessary to reduce the dust nuisance, and to prevent dust which has originated from his operations from damaging crops, orchards, cultivated fields, and dwellings, or causing a nuisance to persons. The Contractor will be held liable for any damage resulting from dust originating from his operations under these specifications on Contracting Authority right-of-way or elsewhere. The Supervisor may direct additional sprinkling or other measures for dust abatement if necessary to obtain adequate control.

146.6 Noise Abatement

The Contractor shall comply with applicable local laws, orders, and regulations concerning the prevention, control and abatement of excessive noise. Night time blasting, the use of jackhammers, pile driving, or other operations producing high intensity impact noise may be performed only upon approval of the Supervisor.

146.7 Light Abatement

(a) The Contractor shall exercise special care to direct all stationary floodlights to shine downward at an angle less than horizontal. These floodlights shall also be shielded so as not to be a nuisance to surrounding areas. No lighting shall include a residence in its direct beam.

(b) The Contractor shall be responsible for correcting lighting problems when they occur as approved by the Supervisor.

146.8 Preservation of Historical and Archaeological Data

(a) Local legislation provides for the protection, preservation and collection of scientific, pre-historical, historical and archaeological data (including relics and specimens) which might otherwise be lost due to alteration of the terrain as a result of any construction project.

(b) If necessary, an archaeological survey will be made along the proposed haul roads to establish the presence of any archaeological or historic remains.

(c) Should the Contractor through his agent or any of his employees in the performance of this contract discover evidence of possible scientific, pre- historical, historical, or archaeological data, he will notify the Supervisor immediately giving the location and nature of the findings. Written confirmation shall be forwarded within 2 days.

(d) The Contractor shall exercise care so as not to damage artefacts of fossils uncovered during excavation operations and shall provide such cooperation and assistance as may

be necessary to preserve the findings for removal or other disposition by the Government.

(e) Where appropriate, by reason of discovery or archaeological finds, the Supervisor may order delays in the time of performance, or changes in the work. or both. If necessary, an archaeological survey should be made along the

(f) proposed haul roads to establish the extent of the cultural resources. If such delays, or changes, or both, are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clauses in the general provisions of this contract.

(g) The Contractor shall insert this paragraph in all sub-contracts, which involve the performance of work on the terrain of the site.

146.9 Pesticides

(a) Pesticides include herbicides, insecticides, fungicides, rodenticides, priscicides, surface disinfectants, animal repellents and insect repellents. Should the Contractor find it necessary to use pesticides in work areas of this contract, he shall submit his plan for such use to the Supervisor for written approval. Such plan shall be subject to submittal to and review by a Pest Control Specialist, if necessary, before the plan is approved. Pesticides shall only be those registered with the respective agency when using pesticides.

(b) The Contractor shall read and comply with all labelling requirements when using pesticides.

146.10 Clean up and Disposal of Waste Material

(a) The Contractor shall, at all times, keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish.

(b) Prior to completion of the work, the Contractor shall remove from the vicinity of the work all plant facilities, buildings, rubbish, unused materials, concrete forms and such like material, belonging to him or used under his direction during construction. All work areas shall be graded and left in a neat manner conforming to the natural appearance of the landscape as provided in Clause 145.1.

(c) Any residue deposited on the ground from washing out transit mix trucks or any similar concrete operations shall be buried or cleaned up in a manner acceptable to the Supervisor.

(d) In the event of the Contractor's failure to perform the above work, the work may be performed by the Contracting Authority, at the expense of the Contractor, and his surety or sureties shall be liable therefore.

(e) Disposal of Waste Material

i) General

Waste materials including, but not restricted to, refuse, garbage, sanitary wastes, industrial wastes, and oil and other petroleum products, shall be disposed off by the Contractor. Disposal of combustible materials shall be by burying, where burial of such

materials is approved by the Supervisor; by burning of approved materials is permitted in accordance with local laws; or by removal from the construction area. Disposal of non-combustible materials shall be by burying, where burial of such materials is approved by the Supervisor, or by removal from the construction area. Waste materials removed from the construction area shall be dumped at an approved dump area.

ii) Disposal of Material by Burying

Only materials approved by the Supervisor may be buried. Burial shall be in pits at locations shown on drawings or as otherwise approved by the Supervisor.

The pits shall be covered by at least 06 metres of earth material prior to abandonment.

iii) Disposal of Material by Burning

All burning shall be in accordance with local laws. All materials to be burned shall be piled in designated burning areas in such a manner as will cause the least fire hazards.

Burning shall be thorough and complete and all charred pieces remaining after burning, except for scattered pieces shall be removed from the construction area and disposed of an otherwise provided in this paragraph. The Contractor shall, at all times, take special precautions to prevent fire from spreading beyond the piles being burned and shall be liable for any damage caused by his burning operations. The Contractor shall have available, at all times, suitable equipment and supplies for use in preventing and suppressing fires and shall be subject to all laws and regulations locally applicable for pre-suppression, suppression and prevention of fires.

iv) Disposal of Material by Removal

Material to be disposed of by removal from the construction area shall be removed from the area prior to the completion of the work under these specifications. Material to be disposed of by dumping shall be hauled to an approved dump. It shall be the responsibility of the Contractor to make any necessary arrangements with private parties and with local officials pertinent to locations and regulations of such dumping. Any fees or charges required to be paid for dumping of materials shall be paid by the contractor.

146.11 Fire and Prevention

(a) The Contractor shall prepare and carry out an effective fire-protection and prevention Programme covering all phases of construction under this contract. The plan shall be submitted to the Supervisor, prior to the start of construction operations. At the option of the Contractor, the fire-protection and prevention Programme may be incorporated into a safety Programme.

(b) The Contractor shall provide and maintain in a ready condition near each active work location a fire-tool cache consisting of at least one 19 litre back pump filled with water, two axes, two McLeod tools, and enough shovels to equip five workers for firefighting purposes. A sufficient number of employees familiar with use of the equipment shall be available at all times when work is in progress. In the event of a fire resulting from project operations, the local fire-protection agency having jurisdiction shall be notified, and the Contractor shall take immediate control action with any and all available equipment and manpower.

(c) In areas where significant fire hazard exists as determined by the Supervisor, the Contractor shall provide a fire patrol for 1 hour after shutdown of construction operations each day during the dry season

(d) In areas where grass, bush, or other natural fuels are present and where roads or creek beds will not serve the purpose. The Contractor shall establish a firebreak on the uphill side of the project. The firebreak shall be within the right-of-way acquired by the Contracting Authority.

146.12 Environmental Management Plan (EMP)

The Environmental Management Plan (EMP) prepared this project is presented at the end of this section. The Contractor will take this plan, upgrade, amend and reconcile it, where appropriate, to his construction proposals. The Supervisor's Representative will then review this plan and make necessary amendments. This will then be referred to as the Project Environmental Management Plan (PEMP). The PEMP will form the principal document upon which all Environmental Monitoring will be based throughout the project.

146.13 Measurement and Payment

No separate measurement and payment shall be made for complying with Clause 146.1 to 146.12. The cost of all work required by these clauses shall be included in the Contractor's rates for other items of work under this Contract.

148 CONTRACTOR'S MOBILIZATION AND DEMOBILIZATION

No separate payment shall be made to the Contractor in respect of mobilization and demobilization of plant and equipment, and such costs shall be deemed to have been included in the rates entered by the Contractor in the Bills of Quantities.

SECTION 2 – MATERIALS AND TESTING OF MATERIALS

202 TESTING BY THE CONTRACTOR

Add the following paragraph to Clause 202 of the Standard Specifications

The onus rests with the Contractor to produce work which conforms in quality and accuracy of detail to the requirements of the Specifications and drawings, and the Contractor must, at his own expense institute a quality control system to ensure adequate supervision and positive control of the Works at all times, and the Contractor must provide chainmen and labourers for the Supervisor to carry out checks on the Works.

The Contractor shall submit to the Supervisor the results of the relevant tests, measurements and levels indicating compliance with the specifications on completion of every part of the work.

The Contractor shall make his laboratory accessible to the Supervisor's Representative for cross checking the test results and inspection during material testing in the laboratory.

204 SIEVES

Amend the following: -

204.1 Sieve Sizes

A standard set of sieves for general use shall consist of the following sieve sizes mm: 100-63-50-37.5-25-20-14-10-6.3-5-4-2-1-0.6-0.5-0.425-0.300-0.150-0.075mm.

The sieves from 0.425 to 0.075 mm shall be suited for wet sieving.

205 SOILS AND GRAVEL

Whenever in the Contract Document a minimum California Bearing Ratio (CBR) is specified, the CBR of the material shall be determined at the specified state of compaction(AASHTO 799)

i) After four days soaking in the case of neat materials and
ii) After seven days curing plus seven days soaking in the case of cement improved materials.

207 CEMENT

Delete "KS 02-21" and replace with "KS 1725 2001 CEM 1 42.5"

211 BITUMINOUS BINDERS

(a) Requirements: -

i) Straight Run Bitumen

In addition to the requirements of the Standard Specification, the ash content of penetration grade bitumen shall not exceed 0.5% by weight.

(b) Types of Bitumen

Prime coat shall be type MC 30
Tack coat shall be type K 1-60
For asphalt concrete, 60/70 penetration grade bitumen shall be used.

218 PAINT FOR ROAD MARKING

a) Colour

i) White

Delete line 1 and 2 and insert:

“The colour of white marking material shall be to BS colour No. 102 of BSS 331C.”

ii) Yellow

Delete line 1 and 2 and insert:

"The colour of yellow marking material shall be to BS colour No.305 (lemon) of BSS 331 C, 1964 (Colour 0-002BCC; 1955).

b) Drying Time

Delete line 1, 2, and 3 and insert instead:

"The material shall have a drying time such that it can be spread uniformly on the road over the line width by the traffic line marker and shall dry sufficiently to withstand traffic within a maximum of 15 minutes after application. This condition shall be satisfied within the climate conditions obtained in any part of Kenya, provided that the bitumen surface shall be completely dry before application of the thermoplastic material and that the painted line shall remain free from water for 15 minutes from the application of the thermoplastic material by the machine or by brush."

c) Reflectorization

In line 3, delete "80%;'" and insert instead “85%.”

In line 4, delete "65%" and insert instead "60%".

d) Materials

i) White Pigment

The pigment used for white shall contain sufficient titanium dioxide and be at least a minimum of 29% of the total pigment composition. The titanium dioxide shall comply with Type A (Anatase) or Type R (Rutile) of BSS 1851, 1967 except that the purity of titanium dioxide shall be 98%.

ii) Yellow Pigment

Lead chromate yellow pigment shall be a minimum of 33% of the total pigment composition.

iii) Solid Content

The thermoplastic material shall have a minimum solid content of 60%.

e) Fineness of Grind

The thermoplastic material shall have a fineness of grind reading not exceeding 75 μm.

f) Specular Gloss at 60^0

The thermoplastic material shall have a specular gloss of the dry film not exceeding 20.

g) Resistance to Cold Water

The dry material film shall show no wrinkling or blistering immediately after having been removed from the water. After a recovery period of two hours, the immersed portion of the film shall have a scratch resistance of at least 1500 g and shall have no whitening.

h) Flexibility

The material film shall not detach or show any signs of flaking or cracking along the bed after it has been tested with the appropriate mandrel.

i) Hiding Power

The thermoplastic material shall show a contact ratio of not less than 90% for white and 80% for yellow thermoplastic material.

j) Resistance to Grit Abrasion

The substrata shall not be visible after the abrasion test described in the standard being used.

k) Resistance to Bleeding

There shall be no colour change after the bleeding test is carried out in a manner prescribed in the standard being used.

l) Resistance to Diesel

The thermoplastic material shall show no signs of blistering after the diesel resistant test of the thermoplastic material applied on a panel.

m) Density

The specific gravity of road marking thermoplastic materials shall between 1.0 and 1.8.

n) Consistency (Viscosity)

Before any dilution, the thermoplastic material should give a minimum viscosityof 70.k u (0.7 pas).

o) Durability (Degree of Erosion)

When tested as prescribed in the standard being used, the total wear index for the test area on each marked trial line shall not exceed 35 at each regular inspection interval over a 12-month period.

226 FREQUENCY OF TESTING

In (i) (ii) (iii) and (iv) delete"T99" and substitute "T180" instead.

xi) Reclaimed Bituminous Materials

The properties of reclaimed bituminous materials shall be determined at the same frequency as the constituent materials.

228 OUTLINE TESTING AND INSPECTION BY THE SUPERVISOR

The Supervisor will at regular intervals inspect and test materials and completed work for compliance with the specified requirements. Samples and lot sizes for routine testing shall be at the Supervisor's discretion.

All sections of completed work including all test results carried out by the Contractor, shall be submitted to the Supervisor for routine inspection and testing and the Contractor shall not cover up or construct any work on top of sections of completed work before written approval has been given by the Supervisor.

The Contractor shall arrange the submission of work for testing in such a manner that the Supervisor will have the opportunity to inspect and test the Works

SECTION 3 – SETTING OUT & TOLERANCES

301 SETTING OUT

a) Basic Survey

The basic survey provided by the Supervisor to the Contractor shall include:

i) A traverse line which is referenced by steel pins in concrete located alongside the works, and

ii) A computer printout of the geometric centreline which will enable the Contractor to set out these lines.

Any abortive setting out resulting from survey errors on the part of the Contractor, and any construction work carried out on the basis of such abortive setting out, shall be rectified entirely at the Contractor's expense.

b) Detailed Setting Out

Reference pegs shall be 50 mm x 50 mm in section, 600 mm long, driven 400 mm firmly into the ground and painted white above ground. The offset from the centreline shall be indicated by a small nail, 20 mm to 25 mm long, with its head driven flush with the top of the peg.

Chainages, offset and reference elevation shall be clearly indicated on the side(s) of the peg to the satisfaction of the Supervisor. This pin shall be co-ordinated and heightened and result of the same shall be provided to the Engineer for approval.

Cost of these works shall be included in the rates as no separate item has been provided.

All the main points of curves shall be referenced clear off the works on either side of the centreline by pins in concrete class 20. All reference pegs shall be maintained as long as they are required by the Supervisor to check the accuracy of the Works.

After cutting of benches and prior to commencement of earthworks or sub-grade works, the Contractor shall take cross-sections again and submit the copy of the same Engineer for agreement. These cross-sections shall then be used as basis of measurement for all subsequent layers, unless otherwise stated.

Commencement of the works shall not be permitted until this basic survey data has been provided and approved by the Engineer for at least 5 km of the road.

c) Grid System

The start and finish of geometric elements along the centreline of the horizontal alignment and intermediate points at regular intervals between these have been identified by coordinates which refer to UTM Grid System. The datum refers to Survey of Kenya Beacons, The Contractor shall make himself fully conversant with this system prior to commencement of any survey work.

302 TOLERANCES

a) Surface Regularity

The tolerances below a straight edge for Base and Bituminous wearing course given in Table 3-1 are amended from 6 mm to 4mm

b) Pavement Widths

The edges of the wearing course, base and sub-base shall nowhere lie closer to the carriageway centreline than the dimensions shown on or calculated from the design data given on the drawings or as amended by the Supervisor in writing to the Contractor, and the half widths of wearing course, base and sub-base measured at any point along the road shall not exceed the nominal width by more than 50 mm for wearing course, base and sub-base.

c) Drainage

The maximum deviation from the specified horizontal line of a pipe culvert shall be 30 mm in 3 m and the vertical line 30 mm in 15 m. The Contractor shall correct any excess deviation before proceeding with the work.

The invert level of drainage ditches both lined and unlined shall be within +0 mm to-50 mm of that specified by the Supervisor and trimmed such that water does not pond. In the event of the Contractor over-excavating any lined or unlined drainage ditches or channels outside the specified tolerances, the Contractor will be held responsible for any additional work ordered by the Supervisor as being, in his opinion, necessary to maintain acceptable invert grades. Such remedial work shall be carried out entirely at the Contractor's expense. Replacement of the over-excavated material within the ditches and channels will not be permitted, unless such material is compacted and that part of the channel is lined, all to the satisfaction of the Supervisor. The Contractor should be aware that the most likely form of remedial work to be ordered by the Supervisor for unlined ditches would be the deepening of the remainder of the ditch or channel downstream of the over- excavated section for such length as the Supervisor deems necessary to avoid ponding, and, in his opinion, sufficient to adequately cope with the design flows.

SECTION 4 – SITE CLEARANCE AND TOP SOIL STRIPPING

401 SITE CLEARANCE

Site Clearance shall be carried out as directed by the Engineer.

402 REMOVAL OF TOPSOIL

Topsoil shall include up to 200mm depth of any unsuitable material encountered and shall be removed only in areas instructed by the Supervisor. Topsoil shall be removed to a depth as directed by the Supervisor and evenly spread within the road reserve, or stockpiled for top soiling of side slopes as directed by, and to the satisfaction of the Supervisor.

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

When instructed by the Engineer, the Contractor shall demolish or remove any structure and payment for this shall be made on day works basis.

SECTION 5 – EARTHWORKS

502 General

Renumber the existing text as 502.1 and add the following Sub-clause 502.2 to this clause:

502.2 Definitions for Earthworks

Formation level is defined as the lower (bottom) level of sub-base. Sub-grade is the material within 300 mm or such other thickness as may be shown on the drawings, below the formation level. Earthworks are defined as the works below the sub-grade level.

504 Preparation Prior to Forming Embankments

Renumber the existing text as 504.1 and add Sub-clauses 504.2 and 504.3 as follows;

504.2 Benching

Where shown on the drawings or instructed by the Engineer, the Contractor shall, where fill is required, excavate benches where the ground to receive the fill has a slope greater than 1 (vertical): 5 (horizontal).

Where benching is required, the existing ground, after removal of top soil in accordance with the requirements of Section 4 of the Specification, shall be benched by cutting steps such that the horizontal width between the cut face of the bench and the instructed final embankment slope is not less than 1.5 m .Each slope shall be graded to a slope of 1 in 40 from the centreline of the road so as to avoid the pounding of water. The minimum width of 1.5 m shall generally be required for each bench and the Contractor shall allow working in narrow widths.

All earthworks in widening shall be compacted to 100% MDD (AASHTO T99).

The volume of material cut from benches and its re-utilization shall not be measured for payment but is deemed to be included in the Contractor's rates for earthworks.

504.3 Ground Compaction

After top soil stripping in accordance with Section 4 of the Specification and benching in accordance with Clause 504 of the Specification, the existing ground, including benches, under embankments shall be compacted to a dry density of at least 95% MDD (AASHTO T99) to a depth of 150 mm below ground level unless otherwise directed by the Engineer. Compaction of benches other than the first bench will not be separately measured and is deemed to be included in the Contractor's rates for earthworks.

505 Construction of Embankments

Only material approved by the Engineer shall be used in embankments. Material with high swelling characteristics or high organic matter content and other undesirable material shall not be used, unless specifically authorized by the Engineer. Unsuitable material shall include:

- Material containing more than 5% by weight of organic matter, such as topsoil , humus, material from swamps, mud ,log stumps and perishable material
- Material with a swell of more than 3%
- Clay with a liquid limit exceeding 50%

- Material having moisture content greater than 105% of optimum moisture content (standard compaction) in its naturally occurring state.

Material for sub-grade shall meet the following requirements:

- CBR of not less than 15% measured after 4 day soak on a laboratory mix compacted to a dry density of 100% MDD(T99)
- Swell less than 1% on the laboratory mix sample
- Maximum dry Density (MDD) not less than 1500 kg/m^2.

Add the following:

In case the Contractor has in his possession heavy compaction equipment, he may opt to construct the sub-grade in a single layer of 300 mm thickness, following compaction trials and upon the Engineer's approval.

Rename the existing text of the Standard Specification as 507.1 and add the following to this clause:

507.2 Rockfill in Carriageway, Embankment and Behind Structures

(a) Scope of Application

With the approval of the Engineer, the rock fill Material can be used only in the following circumstances:

(i) Where the height of embankment is more than 3 m, including formation level, the lowest 1.0 m thickness can be constructed using rockfill.
(ii) For all heights, the sloped portion beyond shoulder can be constructed using with provision that, under all circumstances, a minimum of 500 mm thick earthen cushion shall be available between formation level and top level of rockfill.
(iii) Behind the structures irrespective of the height of embankment up to the bottom of sub-grade.

(b) Material

The maximum size of stones shall not exceed 300 mm in any direction. The voids between rocks shall be filled by smaller rock fragments.

(c) Spreading and Compaction

The method of compaction as specified under Clause 507.1 of the Standard Specification and/or as directed by the Engineer, should ensure that no boulders are loosely packed and can move or rock after compaction. The top layer as well as the sides of the retaining normal earth fill on one side shall be fully blinded with filter media comprising crushed aggregate and sand. The grading and layering of filter media shall be such as to form effective filter layer through which particles of inner soil fill of embankment are not able to migrate into the rock fill layer in the process of settlement/consolidation or due to movement of water. The layer work shall combine with the layers of the adjacent rockfill so as to facilitate simultaneous compaction.

(d) Rates

The rates are applicable to completed construction as measured by taking levels before and after compaction up to the top of blinding/filter media 300 mm thick and are inclusive of all materials, void filling materials, blinding materials and filter media.

The preload material shall be removed from any stage of the construction when, in the opinion of the Engineer, based on settlement monitoring records, the required primary consolidation of the soft silts has been achieved.

Based on consolidation properties of soil, expected preload time shall be estimated for each stage. However, this time can be influenced, not only by settlement, but also by the rains. The Contractor will not be entitled to extra payment should these times be varied due to the site conditions or the rains.

(e) Settlement Monitoring

Continuous monitoring of settlement will be necessary to check the efficiency of the system. The instruments for monitoring settlement and stability shall include settlement platforms, Piezometers to determine if pore pressures are exceeding limits that might endanger stability, and Inclinometers to determine if lateral movement occurs.

Settlement monitoring devices shall be installed at the Contractor's cost to monitor the settlement behaviour of ground under fill, to establish the effectiveness of the drainage system. The Contractor shall carry out the settlement monitoring works, including the installation of all the required equipment, in accordance with Standard Specification.

508 Compaction of Earthworks

Fill above ground level adjacent to pipe culverts shall be compacted in layers not exceeding 150 mm in thickness to a field density of 100% MDD (AASHTO T99) up to the level of the top of the pipes or top of surround. The compaction shall extend for a width equal to the internal diameter of the pipe on either side of the pipe (s) or surround (s).

Adjacent to the structures, all fill above ground level up to the underside of the sub-grade shall be compacted in layers not exceeding 150 mm in thickness to a field density of 100% MDD (AASHTO T99). In case of fill around box culverts, this shall be carried out for the full width of the fill and for a length bounded by the vertical plane passing through the ends of wing walls.

Where the formation in cut areas is formed of hard material, the Contractor shall remove the hard material to a depth of 200 mm or such other depth as may be directed by the Engineer. The void so formed shall be backfilled with sub-grade quality material and compacted to the same standard and tolerances as for sub-grade in fill.

Improved sub-grade, where required as part of the embankment construction shall be compacted and finished to the same standards and tolerances as those required for normal sub-grade.

509 Mass Haul Diagram

No mass haul diagram has been provided with the Contract documents. The Contractor shall locate suitable materials for constructing earthworks along the alignment and elsewhere.

511 Borrow Pits

Delete the first paragraph and substitute with the following;

Fill material which is required in addition to that provided by excavation shall be obtained from borrow pits to be located and provided by the Contractor but to the approval of the Engineer.

514 Top Soiling and Grassing

Consider the existing text to be Sub-clause 514.1

The embankments and cut faces referred to in Clause 514.1 of the Standard Specification are synonymous with fill slopes and cut slopes defined in Clause 110 (c) of the same specification.

The guiding dams referred to in Clause 514.1 of the Standard Specification are synonymous with the guiding dams referred to in Clause 817 of the same specification.

Add the following Sub-clause 514.2

514.2 Hydro-seeding

Where it is specified that hydro-seeding should be carried out on topsoil, the thickness of the topsoil shall be 100 mm unless, where suitable soil is present, the Engineer orders the topsoil to be omitted or applied in reduced thickness.

The Engineer and the Contractor shall agree the types and mixtures of seeds to be used on before the Contractor orders any seed he may wish to use. The variety of resulting grass or plants should not be attractive to livestock or grass eating animals.

The Contractor shall be solely responsible for establishing an acceptable grass cover and any approval by the Engineer of seed or seed mixtures intended for use by the Contractor shall not relieve him of this responsibility. All areas to be hydro-seeded or hand seeded shall be scarified forming horizontal drills running parallel to the contours. The drills are to be spaced at intervals of 150 to 250 mm apart. Seeding to Mulch shall be added to the hydro-seeding mix at an approved rate.

Hydro-seeding shall be carried out with an approved hydro-seeding machine at a rate of application of not less than 20 gm/m2 for fill and cut slopes and 10 gm/m2 for other areas. When the use of anti-erosion compounds is required and such compound is to be applied simultaneously with the hydro-seeding, it shall be mixed with the hydro-seeding mixture before application.

514.3 Application of Chemical Fertilizers

For all areas to be grassed the Contractor shall have the top 150 mm of the prepared surface analyzed to determine the quantity and type of fertilizer that may be required for establishing proper growth conditions for the grass. The locations of soil samples taken shall be indicated on plans by the Contractor. The Contractor shall furnish the Engineer with the soil analysis and subsequent fertilizer recommendations. Only after approval by the Engineer of the nature and quantity of fertilizer may the application proceed.

Soil improvement chemicals and fertilizers shall be made available for application of chemical fertilizer. As such no separate reimbursement to the Contractor shall be made. The Contractor shall be deemed to have included his costs in the rates for top soiling and grassing.

515 Side drains

Whenever excavation works inside drains constitutes a separate operation from the bulk earthworks such excavations shall be classified as catch water drains under Section 8 of the Specification.

517 Measurement and payment

(a) Fill in soft material

Add the following at the end of this item:

Quantities for embankment widening shall be measured using the final compacted volume of filled material over the existing embankment after removal of top soil. No separate payment shall be made to the Contractor for any additional earthworks resulting from his construction methods or for working space for his construction plant and equipment or for complying with the requirements of Clause 504.2 of this specification with respect to benching where necessary. The Contractor shall take this into consideration when preparing his rates.

(c) Spoil in soft material

Add the following at the end of this Item:

The rate for spoil in soft material shall also allow for removal and disposal of material in waterlogged areas. No separate payment shall be made for overhaul.

Add the following:

(n) Item: Providing an approved seed mixture for hydro-seeding

Unit: Kilogramme (kg)

The Unit of measurement shall be the kilogramme of seed of the specified or approved seed mixture provided. The rate shall include the full compensation for procuring and furnishing certified seeds and compliance with Clause 514.2 of this specification.

(o) Item: Hydro-seeding

Unit: Hectare (ha)

The unit of measurement for hydro-seeding shall be the area, measured in hectares of grass established by hydro-seeding which has an acceptable cover. The rate shall include full rate for furnishing cellulose pulp, mixing it with seed, water and with any anti-erosion compound, if required, applying the mixture, watering weeding, reseeding bare patches, and for any other work which may be necessary for establishing an acceptable cover and maintaining the grass.

Add the following to this section. The details apply to both the activities for the quarries and road works.

SECTION 6 – QUARRIES, BORROW PITS, STOCKPILES AND SPOIL AREAS

601 GENERAL

Notwithstanding any indications to the contrary in the Standard Specification the Engineer will not make available to the Contractor any land for quarries, borrow pits, stockpiles and spoil areas, except for those areas in road reserves specifically approved by him.

The Contractor will be entirely responsible for locating suitable sources of materials complying with the Standard and Special Specifications, and for the procurement, wining, haulage to site of these materials and all costs involved therein. Similarly, the Contractor will be responsible for the provision and costs involved in providing suitable areas for stockpiling materials and spoil dumps. Should there be suitable sites for spoil dumps or stockpiles within the road reserve forming the site of the works the Contractor may utilize these, subject to the approval of the Engineer.

No additional payment will be made to the Contractor to cover costs arising from the requirements for this Clause and the Contractor must include these costs in the rates inserted into the Bills of Quantities.

SECTION 7 – EXCAVATION AND FILLING FOR STRUCTURES

703 EXCAVATION OF FOUNDATIONS FOR STRUCTURES

Before commencing excavation for the foundation of any structure, the Contractor shall open up one or more trial pits within the areas of the foundation as directed by the Engineer's representative before excavating for the foundation. Where a trial pit is excavated to a level below the founding level of the structure, it shall be backfilled to that level with approved material or concrete as directed by the Engineer's representative.

Unless otherwise instructed by the Engineer, all excavated surfaces in material other than hard material, on which foundations for structures shall be placed, shall be compacted to 100% MDD (AASHTO T-99) immediately before structures are constructed.

Paragraph 4, last line: - Replace "95%" with "100%".

707 BACK-FILLING FOR STRUCTURES

Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 100% MDD (AASHTO T-99).

709 EXCAVATIONS FOR RIVER TRAINIGN AND NEW WATER COURSES

Payments for river training and establishment of new water-courses shall only be made where such work constitute permanent works. Works done for road deviation or other temporary works shall not qualify for payment.

710 STONE PITCHING

Stone pitching will be undertaken as a soil conservation measure, with soil erosion minimised by ensuring that proper protection works are carried out along the drains using stone pitching. Most of the sections shall be stone pitched especially areas where we have steep slopes to minimise undermining of the road by rain water or as may be instructed by the Engineer.

Stone pitching to drains, inlets and outlets of culverts to embankments and around structures shall consist of sound unweathered rock, which when soaked will withstand a crushing stress of 20N/mm2, and approved by the Engineer.

The stone as dressed shall be roughly cubical in shape with minimum dimensions of 150 x 150mm for normal thickness of stone pitching. Grouting will be done for all stone pitching areas and the top line of the stone pitching should be grouted/sealed with concrete class 15/20.

The surface to receive the pitching shall be compacted and trimmed to slope and the stone laid, interlocked and rammed into the material to give an even finished surface.

In areas where stone pitching has been damaged, the Contractor shall identify such areas and notify the Engineer for his agreement of the extent of the Works required and his approval and instructions to proceed with the Works. Stone pitching repair and re-construction shall be carried out in accordance with Clause 710 of the Standard Specifications.

711 GABIONS

Where instructed by the Engineer the Contractor will install gabions as protection works to washout areas or bridge Piers and or Abutments. Gabions shall be constructed in accordance with Clause 711 of the Standard Specification.

In cases where existing gabions have been damaged, the Contractor shall identify them and notify the Engineer for his agreement of the extent of the Work required and his approval and instructions to proceed with the Works.

The Works shall involve removal of the damaged gabions / rocks, excavation to the correct levels and grades as directed by the Engineer, and in accordance with Clause 711 of the Standard Specifications and reconstruction with new gabions and other necessary materials as necessary. The damaged gabions shall be recovered and transported to the nearest KeRRA Engineer's Yard.

712 RIP-RAP PROTECTION WORK

Quarry waste or similar approved material shall be used to backfill scoured and eroded side, outfall and cut-off drain. The material shall be compacted to form a flat or curved surface preparatory to stone pitching of drainage channels, existing and new scour checks as directed by the Engineer.

The surface to receive the pitching shall be compacted and trimmed to slope and the stone hand laid, interlocked and rammed into the material to give an even finished surface. The interstices of the Pitching shall be, rammed with insitu material. The insitu material immediately behind the pitching shall be compacted to minimum density of 100% MDD compaction (AASHTO T-99)

714 BACKFILL BELOW STRUCTURES

Where instructed this shall be carried out in compliance with the requirements of Clause 507 and 804 of the Standard Specification.

SECTION 8 – CULVERTS AND DRAINAGE WORKS

801 SCOPE OF SECTION

The operations specified in this section apply to the installation of drainage works and reinstatement and improvement of the same.

In addition, this Section covers: -

- Installation of 600mm and 900mm diameter pipe culverts
- Construction of associated inlet and outlet structures to specifications and/or instructions

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

In the Standard Specifications, make the following amendments: -

a) In paragraph 6, line 3, and in paragraph 7, line 5 and in paragraph 11, line 6, delete "95%" and insert "100%".

b) Removal of Existing Pipe Culverts

Where instructed by the Engineer, the Contractor shall excavate and remove all existing blocked or collapsed culvert pipes of 450mm, 600mm and 900mm diameter including concrete surround, bedding, inlet and outlet structure.

The void left after removal of culvert pipes shall be widened as necessary to accommodate new concrete bedding, pipe and haunching.

The payment of this work shall be per linear metre of pipes removed. The void left by removal of these pipes shall be carefully preserved in order to accommodate replacement 600mm or 900mm diameter pipe culverts as shall be directed by the Engineer.

c) Removal of Other Existing Drainage Structures

When instructed by the Engineer, the Contractor shall demolish or remove any other structure and payment for this shall be made on day work basis.

d) Excavation for Culverts and Drainage Works

The Contractor shall carry out all excavations for new culverts and drainage works to the lines, levels, inclinations, and dimensions shown on the drawings or as instructed by the Engineer.

805 EXCAVATION IN HARD MATERIAL

In the Standard Specifications, Sub-clauses 805(a) and 805 (b) delete "95%" and insert "100%".

In sub-clause 809(a), paragraph 1, line 1, substitute "95%" with "100%".

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 100% MDD (AASHTO T-99)".

Hard material is material that can be excavated only after blasting with explosives or barring and wedging or the use of a mechanical breaker fitted with a rock point in good condition and

operated correctly. Boulders of more than 0.2m3 occurring in soft material shall be classified as hard material.

809 BEDDING AND LAYING OF PIPE CULVERTS

Concrete pipes shall be laid on a 150mm thick concrete bed of class 15/20 and the pipes shall be bedded on 1:3 cement: sand mortar at least 50mm thick, 150mm wide and extending the full length of the barrel.

The rates inserted shall allow for compaction of the bottom of excavation to 100% MDD (AASHTO T-99).

810 JOINTING CONCRETE PIPES

The concrete pipes for the culverts shall have ogee joints and the joints flushed up with 1:2 cement: sand mortar and provided with fillets on the outside as described in Clause 810 of the Standard Specification.

812 BACKFILLING OVER PIPE CULVERTS

In the Standard Specifications, clause 812

1) Delete paragraph 6 “for pipe culverts ..... depth of 150mm”, entirely.

2) Wherever the expression "dry density of 95% MDD (AASHTO T-99)" occurs delete and replace with "dry density of 100% MDD (AASHTO T-99)".

The rates entered for laying of pipe culverts shall allow for backfilling to pipe culverts and compacting to 100% MDD (AASHTO T-99) and these works shall not be measured and paid for separately.

814.1 SUBSOIL DRAINS

In the event of excavation for repairs exposing local seepage, springs or unacceptably high-water table, the Engineer may instruct the provision of counter fort or French drains.

These drains shall consist of a trench excavated to the alignment, width, depth and gradient instructed by the Engineer, and backfilled with approved compacted clean hard crushed rock material as specified in clause 815 of the standard specification. Where these drains lie within the carriageway the carriageway shall be reinstated with compacted stabilised gravel and surfaced with hot asphalt or a surface dressing as instructed by the Engineer.

814.2 FILTER FABRIC TO SUBSOIL DRAINS

A filter fabric shall be placed under, around and over rock fill of the subsoil drains. The provisions and placing of the fabric shall be in accordance with manufacturer’s instructions and complying with Clause 804 and 814 of the Standard Specification. Payment shall be in metre square of the fabric used.

815 INVERT BLOCK DRAINS AND HALF ROUND CHANNELS

Invert Block Drains and Half Round Channels shall be constructed as shown in the drawings provided in accordance with the Standard Specifications, where directed by the Engineer.

817 REPAIRS TO DRAINS

Cleaning and Repair of Existing Drains

In areas of existing side drains, mitre or outfall drains where such are blocked, the Engineer shall instruct the Contractor to clean and clear the drains to free-flowing condition.

The work shall consist of:

(a) Stripping and removal of any extraneous material to spoil including vegetation and roots in the drains to the satisfaction of the engineer.

(b) Spreading of any spoil to the satisfaction of the Engineer.

(c) Shaping the drains to free-flowing condition as directed by the Engineer.

Measurement and Payment for cleaning drains shall be by linear metre of drain cleaned measured as the product of plan area and vertical depth of extraneous material instructed to be removed. No extra payment will be made for removal of vegetation and roots.

Channels

The Engineer may instruct that the Contractor provides open channels in place of existing sub-drains where the latter may be damaged or in any other place. The rates entered by the Contractor in the bills of quantities must include for removal and disposal of any sub-drain material, excavation to line and level, backfilling and compaction as directed by the engineer. The channels shall be constructed of precast class 20/20 concrete of minimum 80mm thickness and lengths or widths not exceeding 1000mm. Joints shall be at least 15mm wide filled with 1:2 cement sand mortar.

Spoil Material

The Contractor shall be responsible for removal from site of all materials excavated in the course of undertaking works in this section of the specification, unless suitable for re-use, and deposit of the material in a spoil dump to be approved by the Engineer.

818 SCOUR CHECKS

Scour checks are to be constructed in mass concrete in accordance with clause 818 of the standard Specifications and the drawings as shall be provided.

819 CLEANING AND MAINTENANCE

De-silting of Pipe Culverts

Where instructed, the Contractor shall de-silt the existing pipe culverts by removing all the material from the pipe to make them clean and free flowing.

Measurement and payment shall be by the linear metres of pipes de-silted, regardless of diameter size.

821 CONCRETE GUTTERS AT BUS-BAYS

Where raised Kerbs are provided at bus-bays, openings shall be provided through the raised Kerbs to facilitate drainage as shown on the drawings or directed by the Engineer.

The opening shall be constructed through the bus-bay berm and embankment backslope behind the berm into the adjoining roadside ditch.

The opening shall be of 200 mm width other dimensions being left as they are shown on the drawings, or as instructed by the Engineer.

Measurements and payment for gutters at bus-bays shall be per linear metre, the rate being inclusive of the costs for setting out, excavation to line and level, trimming, compacting the invert trench, disposal of excavated surplus material, providing, transporting and laying, of concrete and the necessary formwork, backfilling, watering and compacting of the concrete as required.

SECTION 9 – PASSAGE OF TRAFFIC

901 SCOPE OF SECTION

The Contractor shall so arrange his work to ensure the safe passage of the Traffic at all times and if necessary, construct and maintain an adequate diversion for traffic complete with all the necessary road traffic signs.

The Contractor shall provide to the satisfaction of the Engineer adequate warning signs, temporary restriction signs, advance warning signs, barriers, temporary bumps and any other device and personnel equipped with two-way radios to ensure the safe passage of traffic through the works.

When carrying out the Works the Contractor shall have full regard for the safety of all road users.

The Contractor shall also provide sign posts and maintain to the satisfaction of the Engineer all deviations necessary to complete the works. The Contractor should allow for the costs of complying with the requirements of this clause in his rates.

The Contractor will be deemed to have inspected the site and satisfied himself as to the adequacy of his bid for these works and no additional payments will be made to the Contractor for any expenditure on traffic control or the provision of deviations. The Employer shall not be liable for inadequate prior investigations of this nature by the Contractor.

904 CONSTRUCTION OF DEVIATIONS

a) General

The existing level of public traffic is light and the contractor is expected to generally pass the public traffic through the works along lengths of the project road. But in circumstances where this is not practically feasible, the contractor will bring this to the attention of the Engineer, and if directed by the Engineer, the contractor will construct and maintain deviations in accordance with Section 9 of the Standard Specifications.

In addition to requirement of this clause, the maximum length of deviation road shall be restricted to 5kms at any given time unless otherwise instructed. The Contractor shall construct and complete deviations to the satisfaction of the Engineer before commencing any permanent work on the existing road. Also, during these works the Contractor is supposed to provide a detour of adequate pipe culverts for pedestrian and traffic crossing where there is bridge works.

Contractor will be allowed to open further 5 km of the deviation road only when 80% of the permanent work has been completed on the first one and he will not be allowed to open any further5 km section till he has completed first 10 km of the road and has it opened to traffic. The sequencing of deviation road has been shown on the drawing.

Where the old road exists near the main road, Contractor shall use this road as deviation road.

b) Geometry

The carriageway width of the deviations shall not be less than 6m wide and suitable for 2-way lorry traffic unless otherwise specified.

c) Construction

Unless otherwise instructed gravel wearing course for the deviation shall be 150 mm compacted thicknesses complying with section 10 of the Standard Specification. The Contractor shall allow in his rate for removal of any unsuitable material before placing of gravel wearing course, as this will not be paid for separately.

In addition to provision of this clause, Contractor is required to sprinkle water at least 4 times a day at the rate of1 to 1.4 litres/m^2/day at regular interval to minimise the effects of dust. Latest sprinkling time shall be one hour before the sunset.

906 PASSAGE OF TRAFFIC THROUGH THE WORKS

The Contractor shall arrange for passage of traffic through the works during construction whenever it is not practicable to make deviations. The cost of doing so shall be deemed to have been included elsewhere in his rates and no separate payment shall be made for this. To this end, the Contractor shall be deemed to have inspected the site for himself and noted any locations where this may apply.

Any damage caused by passing traffic through the works shall be made good at the Contractor's own cost.

907 SIGNS, BARRIERS, AND LIGHTS

Contractor shall provide signs, barriers and lights as shown in the drawing in Book of Drawings at the locations where the traffic is being carried off the existing road to the deviation and back again to existing road. The Contractor shall provide ramps and carry out any other measures as instructed by the Engineer to safely carry traffic from the road to deviation.

Contrary to what has been specified in this clause the road signs provided shall be fully reflectorized and in conformity with clause 9.1 of the "Manual for Traffic Signs in Kenya Part II".

909 ASSISTANCE TO PUBLIC

In addition to provision of clause 909, Contractor shall maintain close liaison with the relevant authorities to clear any broken down or accident vehicles from the deviations and the main road, in order to maintain smooth and safe flow of the traffic.

912 MEASUREMENT AND PAYMENT

(a) Passage of traffic through the works

Payment shall be made on Lump Sum basis.

(b) Construct Deviation

(i) Road Deviation

The Contractor shall be paid only 50% of the rate for this when he completes deviation road to the satisfaction of the Engineer. The balance shall be paid in equal monthly instalments over the contract period, as he satisfactorily maintains the deviation (as per clause 904 and 905 above) when it is in operation.

(ii) Deviation using Pipe Culverts

The Contractor shall be paid only 50% of the rate for this when he completes deviation to the satisfaction of the Engineer. The balance shall be paid in equal monthly instalments over the contract period, as he satisfactorily maintains the deviation when it is in operation. The Contractor shall be paid full amount when the bridge under construction will be in use.

(c) Assistance to Public

The Contractor will be deemed to have included cost of this item in other items and no separate payment shall be made.

SECTION 11 – SHOULDERS TO PAVEMENT

1101 GENERAL

Shoulders shall be constructed as per the drawings or as directed by the Engineer.

1102 MATERIAL FOR CONSTRUCTION OF SHOULDERS

The shoulders shall be constructed as directed by the Engineer, in accordance with sections 11, 12, 14 and 15 of the Standard Specification. The material for shoulders shall be the same as that of base and sub-base layers in the carriageway.

1105 SURFACE TREATMENT OF SHOULDERS

The shoulders to the whole stretch of the road shall be as per the drawings or as directed by the Engineer

1106 MEASUREMENT AND PAYMENT

Payment for shoulder construction shall be in accordance with the relevant clauses in sections 11, 12, 14, and 15 of the relevant Specifications. Payment for fill material on shoulder shall be in accordance with Section 5 of this specification.

SECTION 12 – NATURAL MATERIAL SUBBASE AND BASE

1201 GENERAL

(a) Definitions

The term “natural material” includes lateritic gravel, quartzitic gravel, calcareous gravel, soft stone, coral rag, conglomerate, sand or clayey sand, a combination of any of these materials or a mixture of natural gravel and upto 30% of stone (crushed or not). A natural material is also referred to as “gravel”.

(b) Sources of materials

Natural material for subbase and base may be obtained from any of the following sources: -

(i) Borrow pits

(ii) Spoil areas

(iii) Excavation in cuttings, widened if necessary.

In all cases the Engineer will instruct the Contractor as to the source of material to be used and the location in which it is to be placed.

(c) Inspection of site

Where a source of material is available for inspection during the Tender

Period the Contractor shall satisfy himself as to the nature and amount of work involved particularly in respect of the volume of overburden, the quality and hardness of material, the degree of selection necessary, the method of extraction, and access to the source.

(d) Borrow pits

The Contractor shall comply with all the requirements of Section 6 of this Specification in respect of borrow pits.

1202 CLASSIFICATION OF MATERIAL

Natural material shall be material which can be extracted from a borrow area or a road cutting by ripping to a depth of 300 mm with a single tine hydraulic ripper acceptable to the Engineer drawn by a track type crawler tractor in good order complete with all equipment and accessories as supplied and rated at 300 BHP flywheel power and over with an operating weight of not less than 37.2 tonne and being operated in accordance with the manufacturer’s recommendations.

The material may require the use of either a grid or sheep foot roller with more than 8000 kg mass per metre width of roll to break it down and/or screening to achieve the specified grading.

1203 MATERIAL REQUIREMENTS

(a) Gravel with Minimum Soaked CBR Value of 25% (G25)

Material for G25 subbase shall include natural gravel or a mixture of natural gravel and up to 30% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 63mm
- Passing 0.075mm sieve : Maximum 35%
- Plasticity Index : Maximum 15%
- CBR (4 days soak) : Minimum 25%

(b) Gravel with Minimum Soaked CBR Value of 30% (G30)

Material for G30 subbase shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the specifications given in Section 1203(a) of the Standard Specifications for Road and Bridge Construction but with maximum PI of 12%.

The material shall comply to the following grading envelope after compaction:

BS Sieve size (mm)	Percentage by weight passing
63	100
37.5	80-100
20	60-100
5	30-100
1.18	17-75
0.3	9-50
0.075	5-25

(c) Gravel with Minimum Soaked CBR Value of 50% (G50)

Material for G50 base shall include natural gravel or a mixture of natural gravel and up to 30% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 12%
- Plasticity Modulus : Maximum 250
- LAA : Maximum 70%
- CBR (4 days soak) : Minimum 50%

The material shall conform to the following grading envelope after compaction:

BS Sieve size (mm)	Percentage by weight passing
50	100
37.5	95 - 100
28	80-100
20	60 - 100
10	35-90
5	20-75

2	12-50
1	10-40
0.425	7-33
0.075	4-20

(d) Gravel with Minimum Soaked CBR Value of 60% (G60)

Material for G80 base shall include natural gravel or a mixture of natural gravel and up to 80% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 10%
- Plasticity Modulus : Maximum 250
- LAA : Maximum 70%
- CBR (4 days soak) : Minimum 60%

The material shall conform to the following grading envelope after compaction:

BS Sieve size (mm)	Percentage by weight passing
50	100
37.5	95 - 100
28	80-100
20	60 - 100
10	35-90
5	20-75
2	12-50
1	10-40
0.425	7-33
0.075	4-20

(e) Gravel with Minimum Soaked CBR Value of 80% (G80)

Material for G80 base shall include natural gravel or a mixture of natural gravel and up to 80% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 10%
- Plasticity Modulus : Maximum 250
- LAA : Maximum 50%
- CBR (4 days soak) : Minimum 80%

The material shall conform to the following grading envelope after compaction:

BS Sieve size (mm)	Percentage by weight passing
50	100

37.5	95 - 100
28	80-100
20	60 - 100
10	35-90
5	20-75
2	12-50
1	10-40
0.425	7-33
0.075	4-20

(f) Material for Cement/Lime Improved Gravel of CBR 60% (CIG 60)

Material for CIG 60 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 5-35%
- Plasticity Index : Maximum 20%
- CBR (4 days soak) : Minimum 25%

After treatment the material shall have a CBR of at least 60% measured after 7-day cure and 7-day soak on the site mix compacted to at least 95% MDD AASHTO T180 and the treated material shall have a plasticity index less than 8% and a plasticity modulus less than 250.

(g) Material for Cement/Lime Improved Gravel of CBR 100% (CIG 100)

Material for CIG 100 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 5-35%
- Plasticity Index : Maximum 20%
- CBR (4 days soak) : Minimum 25%

After treatment the material shall have a CBR of at least 100% measured after 7-day cure and 7-day soak on the site mix compacted to at least 95% MDD AASHTO T180 and the treated material shall have a plasticity index less than 6% and a plasticity modulus less than 250.

(h) Material for Cement/Lime Improved Gravel of CBR 160% (CIG 160)

Material for CIG 160 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the

requirements given in Section 1203(d) of the Standard Specifications for Road and Bridge Construction but shall have Plasticity Index not exceeding 20% and 4-day soak CBR of at least 25%.

SECTION 13 – GRADED CRUSHED/HAND PACKED STONE SUBBASE AND BASE

1301 GRADED CRUSHED STONE

The material for graded crushed stone shall comply with the requirements of stone Class C for 0/40 mm

1303 GRADED CRUSHED STONE

(a) Properties

Graded Crushed Stone for base and sub-base shall conform to the specifications given in Section 13 of the Standard Specifications and shall be stone Class c in accordance with Clause 1303(b) of the standard specification.

(b) Grading

The Nominal size of the base and subbase material shall be 0/40 mm in accordance with clause 1303 (c) of the standard specifications

1306 LAYING AND COMPACTING GRADED CRUSHED BASE-COURSE

Laying of the GCS shall be by self-propelled paver approved by the Engineer.

1309 TREATED MATERIALS

Contrary to the provisions of the Standard Specifications, mixing of GCS and cement shall be by a continuous pug-mixer approved by the engineer

1310 MEASUREMENT AND PAYMENT

Contrary to the Standard Specifications, the rate inserted for the GCS and Cement shall allow for winning, mixing, watering, laying by paver and compaction as required or called for in the Standard Specifications or as directed by the Engineer.

1311 HAND PACKED STONE

Hand packed stone base is a layer of hand laid stone of defined size and durable in nature, laid in a manner such that when proof rolled and compacted it forms a stable and dense matrix as a road base.

a) Material for Hand Packed Stone Base

This shall consist of durable stone with nominal base dimensions of 75 mm square and minimum height of 150 mm or when compacted to give a layer of 150 mm. The stone shall be class C with the following requirements:

LAA	45 max
ACV	32 max
SSS	12 max
FI	30 max
CR	60 min.

It shall be free from foreign matter. The fines passing 0.425 mm sieve shall be NONPLASTIC.

b) Laying

The stone shall be laid by hand closely together. The stone shall be carefully bedded and tightly wedged with suitable spalls. The base of the stone shall alternate with the apex in all directions or as directed by the Engineer. The layer shall be proof rolled with a loaded scrapper or truck with a minimum axle load of 8 tonnes in the presence of the Engineer who shall approve of its stability before compaction.

c) Compaction

This shall be by a steel wheeled roller of at least five tonnes per metre width of roll. It shall consist of four static runs or until there is no movement under the roller. There shall follow vibratory compaction until an average dry density of 85% minimum of specific gravity of stone has been achieved. No result shall be below 82% of specific gravity. The surface of the compacted layer shall then be levelled by quarry dust (0/6 mm). The dust shall have the following specifications:

The stone shall be class C

Grading

Sieve Size	% Passing
10	100
6.3	90-100
4	75-95
2	50-70
1	33-50
0.425	20-33
0.300	16-28
0.150	10-20
0.075	6-12

The dust shall be free from foreign matter and fines passing 0.425 mm sieve shall be non-plastic. The maximum layer shall be 40 mm or as directed by the Engineer

d) Measurement and Payment

Payment shall be by the cubic metre laid (m^3). Measurement of volume shall be determined as the product of length and compacted thickness laid. The rate quoted for this item should include the cost for laying the levelling quarry dust layer, as no extra payment shall be made for this layer.

SECTION 14 – CEMENT AND LIME TREATED MATERIALS

1403 CEMENT TREATEMENT

a) Cement

In variation to this Sub-Clause, cement for improvement shall be ORDINARY PORTLAND CEMENT (OPC) complying with KS 1725:

2001 CEM I 42.5 N or equivalent, subject to the Engineer's approval. Thecement content of the stabilised material shall be as indicated by the Engineer and will normally be about 4%. The Engineer shall exercise hisdiscretion to any variation in the rate of application of the cement, whichhe may see fit to order from time to time.

b) Moisture Content

The moisture content of the stabilised material shall be as directed by the Engineer but nevertheless within the range of 85% to 105% of the Optimum Moisture Content (AASHTO T180).

c) Mixing and Placing

The material to be stabilised and the cement shall be mixed by an approvedmixing plant which will either be a mix-in-place pulvimixer or a stationarymixing plant for material to be used for pavement construction, widening and shoulders.

LIME TREATMENT

Lime treatment will be as outlined in the Standard Specifications for road and bridge construction. The lime content of the stabilised material shall be as indicatedby the Engineer and will normally be about 2-4%.

1409 PROTECTION AND CURING

Protection and curing shall be carried out in accordance with the provisions of Clause 1409(i) of the Standard Specification but provision shall be made to wet the surface from time to time as directed by the Engineer.

1410 TRAFFIC

Traffic across the works will be restricted as outlined in the Standard Specifications.

1412 MEASUREMENT AND PAYMENT

Improvement Agent: the provision of the improvement agent shall be measured by the tonne calculated as the specific weight of agent added to the material.

Mix-in improvement Agent: Mixing improvement agent into the material shall be measured by the cubic metre of treated material calculated as the product of the compacted sectional area treated and the length.

The Contractor may be required to carry out research on different soils stabilizing agents. Rates in relevant bills of quantities to apply.

SECTION 14A – LEAN CONCRETE AND PAVING BLOCKS

14A/09 CONCRETE PAVING BLOCKS

Concrete paving blocks shall be those meeting the requirements of Section 20 of the Standard Specifications. Where required for carriageway and shoulders wearing courses, the thickness shall be 80mm, while for walkways the thickness shall be 50mm.

The paving blocks shall be laid on a primed base course layer meeting the requirements of Section 12 and 14 of the Standard Specifications. The primer shall be MC 30, meeting the requirements of section 15 of the Standard Specifications.

Edge restraints shall be constructed using road kerbs and flush kerbs meeting the specifications requirements of Section 20 of the Standard Specifications before laying of the paving blocks. The road kerbs and flush kerbs edge restraints shall be constructed with 10mm drainage joints for the paved carriageway and shoulders.

A laying layer of 50 mm thick sand/quarry dust shall be provided uniformly across the surface to receive the paving blocks. The blocks shall then be hand laid in position and vibrated using a plate compactor with specifications approved by the Engineer.

SECTION 15 – BITUMINOUS SURFACE TREATMENTS

PART A – GENERAL

1501A GENERAL

Details of the spray rates for bitumen and the spread rates for chippings will be directed by the Engineer but the under listed is anticipated and can be used for guidance purpose i.e.;

a) Chippings

- 14/20mm size pre-coated chippings at a spread rate of 60-90 square meters per cubic meter.
- 10/14mm size pre-coated chippings at a spread rate of 80-120 square meters per cubic meter.
- 6/10mm size pre-coated chippings at spread rate of 80-120 square meters per cubic meter.

b) Bitumen Spray Rates

- 1.0 - 1.4 l/m^2 for the first seal
- 0.6 - 1.0 l/m^2 for the second seal.

The Average Least Dimension (ALD) shall be determined in the field after crushing the rock for chippings and then determine the actual spray rates and chipping spread rates

PART B – PRIME COAT AND TACK COAT

1502B MATERIALS FOR PRIME COAT AND TACK COAT

For prime coat, the binder shall be a medium-curing cutback MC-30 unless otherwise directed by the Engineer.

The rate of spray of bituminous prime coat refers to the gross volume of the cutback bitumen, that is to say the volume of the bitumen plus dilutants.

Prime coat shall be applied to gravel areas that are to receive double seal surface dressing or bituminous mixes as directed by the Engineer.

The tack coat shall consist of bitumen emulsion KI-60 unless otherwise directed by the Engineer.

The rates of spray of the binder shall be as instructed by the Engineer and shall generally be within the range 0.8-1.2 litres/square metre.

1503B PREPARATION OF SURFACE

In addition to requirements of Clause 1503B of the Standard Specifications, the Contractor shall prepare and repair cracks, edges, potholes and other failures as follows: -

- Where instructed, the Contractor shall prepare areas for the repair of potholes, road edges and other repair areas by excavating off unsuitable or failed material and debris, trimming off excavated edges, cleaning and compacting the resulting surfaces and applying MC 30 cut-back bitumen prime coat and bitumen emulsion KI-60 tack coat, all as directed by the Engineer. Measurement and payment shall be made under the relevant item of Bill No 15.

- Where the surface repair on potholes and edges are to be carried out, Asphalt Concrete Type I (0/14 gradation) shall be used. Bituminous material for repair of failures and other repair areas shall be paid for under the relevant item of Bill No 16

PART C – SURFACE DRESSING

1502C MATERIALS FOR SURFACE DRESSING

(a) Binder

The bituminous binder shall be penetration grade bitumen cut-back with kerosene fuel in accordance with prevailing road temperatures, and conforming to Clause 211 of the Standard Specification.

(b) Chippings

Chippings shall be of class 1 material and shall comply in all respects with Clause 1502C of the Standard Specification. The Contractor's attention is drawn to the requirements of Clause 1501C of the Standard Specification with regard to cleanliness and dust content of chippings for surface dressing. Should it prove necessary in the Engineer's opinion to wash chippings, no extra payment will be made to the Contractor for this operation.

1503C SPRAY AND SPREADRATES OF BITUMEN AND CHIPPINGS

Spray and Spread Rates for bitumen and chippings cannot be calculated until samples of the chippings to be used are available for test.

After submission of samples and completion of laboratory tests on chippings and binder, the Contractor shall in the presence of the Engineer and the Chief Materials Engineer or representatives, lay trial sections of seal at various rates of spray and spread as directed by the Engineer and in accordance with clause 1503C of the Standard Specification.

Should any change occur in nature of source of chippings or bitumen, the Contractor shall advice the Engineer accordingly who will then decide if any revisions are required to the spray and spread rates.

If any changes are required, the Contractor shall carry out further trials as instructed by the Engineer.

Payment for binder and chippings will be based on the instructed spray and spread rates used which may not necessarily be those specified. The Engineer will specify the spray rates of bitumen as residual bitumen per square meter. Actual spray rates used by the Contractor must be adjusted to compensate for any cutter added.

1505C PRE-COATED CHIPPINGS

Chippings utilized for surface dressing works under this contract shall be pre- coated in accordance with clause 1505C of the Standard Specification. The binder used for pre-coating chippings shall be MC 30 cut-back bitumen.

The amount of bituminous binder used to pre-coat chippings will be as instructed by the Engineer and will normally be between 0.4% and 1.0% residual bitumen as percentage of the total dry weight.

Prior to laying any pre-coated chippings the Contractor shall prepare trial mixes of bitumen and chippings in the presence of the Engineer. After completion of trial mixes, the Engineer shall issue written instructions to the Contractor indicating the

amount of binder to be added in pre-coated chippings. The Contractor shall maintain this proportion unless the surface or nature of the chippings changes when the Contractor shall repeat the trials and the Engineer will issue revised instruction.

1511C MEASUREMENT AND PAYMENT

(a) Seal coat

Seal coats shall be measured by the litre, for each type of bituminous binder for each seal coat, calculated as the product of the area in square metres sprayed and the rate of application in litres/square metres, corrected to 15.6°C.

(b) Chippings

Chippings shall be measured by the cubic metre of each nominal size for each class calculated as the product of the area in square metres covered and the reciprocal of the instructed rate of application in square metres/cubic metre or the actual rate of application in square metres/cubic metre whichever calculation gives the lower volume.

SECTION 16 – BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES

PART B – ASPHALT CONCRETE FOR SURFACING

1601B Asphaltic Concrete Type II shall be used and shall meet all the requirements of the relevant Clauses of both Standard Specifications for Roads and Bridges construction of Ministry of Transport and Communication and the current (August 1987) Ministry of Roads and Public Works Road Design Manual Part III. Where the requirements of the two differ, those of Standard Specifications for Roads and Bridges shall prevail.

The material requirements will be as follows:

(a) Bitumen shall be 80/100 penetration grade

(b) Aggregates:

Stone Class b Grading 0/14

(c) Mineral filler - as per Clause 1602B (c)

Introduce the following amendments to Section 16 of Standard Specifications:

- 1602B(b) - the aggregate for asphalt concrete Type I shall comply with the requirements for coarse aggregates class b as specified in clause 1602B(b) of standard specifications

- 1602B(c) - the grading for aggregate for binder course shall conform to the requirements for Type I binder course asphalt concrete as given in table 16B- 1

- 1604B - the requirements for asphalt concrete shall conform to the specifications for Type I Binder course as given in clause 1604(B) of Standard Specifications table 16B-2

- 1607B(b) Variation in binder content - there shall be no extra payment for variation of binder content from the that specified in the design mix.

SECTION 17 – CONCRETE WORKS

1703 MATERIALS FOR CONCRETE

This work shall consist of placing selected approved material of 250mm minimum diameter on the foundation put after excavation to receive levelling concrete in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the Drawings as directed by the Engineer.

(a) Materials

Selected rock: The selected rock boulders to be placed for this work shall be hard, sound, durable quarry stones as approved by the Engineer. Samples of the stone to be used shall be submitted to and approved by the Engineer before any stone is placed.

The maximum size of the stone boulders shall be 300mm.

(b) Construction Method

After completion of the structural excavation the surface of the loose soil shall be levelled and compacted. Then the stone of the above sizes shall be placed in one layer of 250mm over the compacted bed where the bottom slab will rest. Coarse sand shall be spread to fill up the voids in the stone boulders, and compaction with vibratory compactors should be performed to make this layer dense whereon a concrete of levelling course shall be placed.

(c) Measurement and payment

Measurement for the bedding materials shall be made in cubic metres for the completed and accepted work, measured from the dimension shown on the Drawings, unless otherwise directed by the Engineer.

Payment for the bedding Materials for Levelling Concrete Works shall be full compensation for furnishing and placing all materials, all labour equipment, tools and all other items necessary for proper completion of the work in accordance with the Drawings and specifications and as directed by the Engineer.

1703(A) LEVELLING CONCRETE (CLASS 15/20) FOR BOTTOM SLAB INCLUSIVE OF COST OF FORMWORKS

This work shall consist of placing and levelling lean concrete class 15/20 over the prepared bed of stone boulders in the foundation for bottom slab and wing walls in accordance with these specifications and which conformity with the lines, grades, thickness and typical cross-sections shown on the drawings unless otherwise directed by the Engineer.

(a) Materials for Levelling Concrete

Requirement for the concrete class 15/20 is specified as follows: -

Design compressive strength (28) days : $15N/mm^2$

Maximum size of coarse aggregate : 20mm
Maximum cement content : 300 kg/m^3.
Maximum water/cement ration of 50% with slump of 80mm.

(b) Construction Method

The bed of stone boulders upon which the levelling concrete will be placed shall be smooth, compacted and true to the grades and cross-section shall be set to the required lines and grades.

(c) Measurement and payment

Measurement for levelling concrete (class 15/20) shall be made in cubic metres completed and accepted levelling concrete work measured in place which is done in accordance with the Drawings and the Specifications.

Payment for this work shall be the full compensation for furnishing and placing all materials, labour, equipment and tools, and other incidentals to Specifications and as directed by the Engineer.

Pay item No. 17/02 Levelling Concrete Works (Class 15/20) for Box Culvert and wing walls inclusive of Cost of Form works.

1703(B) REINFORCING BARS OF WALLS AND SLABS

This work shall consist of furnishing, fabricating and placing in the concrete of the bottom slab, top slab, median wall, sidewalls, wing walls and aprons, reinforcing bars of the quality, type and size in accordance with these specifications in conformity with the requirements shown on the Drawings.

(a) Material:

Reinforcing bars shall be deformed and shall meet the requirements of British standard BS4461, unless otherwise called for the drawings or approved by the Engineer.

No reinforcing bar shall be delivered without a certificate guaranteeing the yield stress. The reinforcing bars shall be kept off the ground, free from dirt, oil, grease, or avoidable rust and stored within a building or provided with suitable covers.

If it is necessary for the Engineer to ascertain the quality of the reinforcing bars, the Contractor shall test the reinforcing bars, at his own expense, by means as directed by the Engineer.

(b) Construction Method

(i) Bar Bending Schedule:

The Engineer shall provide the Contractor with bending schedule showing the location types, sizes, bending dimensions and cut lengths of the reinforcing bar required to be fixed in the works.

(ii) Cutting and Bending:

Qualified personnel shall be employed for the cutting and bending, and proper application shall be provided for such work.

Bars shall be cut and bent cold to the dimensions indicated and with equipment and methods approved by the Engineer.

Stirrups and tie bars shall be bent around a pin having a diameter not less than 15 times the minimum diameter of the bar. Bends of other bars, where full tension in the bar may occur, shall be made around a pin having a diameter not less than 7.5 times the bar diameter as shown on the Drawings.

Reinforcing bars shall be accurately formed to the shapes and dimensions indicated on the Drawings, and shall be fabricated in a manner that will not injure the materials.

(c) Placing

Reinforcing bars shall be accurately placed in proper position, and so that they be firmly held during placing of concrete.

Bars shall be tied at all intersections by using annealed iron wire 0.9mm or larger diameter, or suitable clips.

Distances from the forms shall be maintained, corrected by means of metal hangers, metal blocks, metal supports or other supports approved by the Engineer.

The Engineer shall inspect reinforcing bars after placing. When a long time has elapsed after placing reinforcing bars, they shall be cleaned and inspected again by the Engineer before placing concrete.

(d) Splicing and Joint

When it is necessary to splice reinforcing bars at points, position and methods of splicing shall be determined based on strength calculations and approved by the Engineer.

In lapped splices, the bars shall be lapped by the required length, and wired together at several points by using annealed iron wire larger than 0.9mm.

Exposed reinforcing bars intended for bonding with future extensions shall be effectively protected from injury and corrosion.

Oxyacetylene welding joint of reinforcing steel shall be done only if authorised by the Engineer in writing.

(e) Measurement and Payment

Bending and installation of reinforcing bar of piers and abutments shall be measured in terms of tons. The length of steel bar of each size will be shown on the drawings in which the bar length for splicing is excluded. In computing the weight to be measured,

the theoretical weights of bars of the cross-section shown on the Drawings or authorised shall be used.

These weights are given in the following table: -

Bar type and the Cross-sectionin millimetres	Weight of Bar in Kilogramme - per 12m length of bar
D10	7.40
D12	10.66
D16	18.95
D20	29.60
D25	46.30

1703(C) FORMWORKS FOR CULVERT WALLS AND SLABS

This work shall consist of all temporary moulds for forming the concrete for culvert walls and slabs together with all temporary construction required for their support. Unless otherwise directed by the Engineer all formworks shall be removed on completion of the walls and slabs.

(a) Materials

Forms shall be made of wood or metal and shall conform to the shape, lines and dimensions shown on the Drawings.

All timber shall be free from holes, loose material, knots, cracks, splits and warps or other defects affecting the strength or appearance of the finished structure.

Release Agents – Release agents shall be either neat oils containing a surface activating agent, cream emulsions, or chemical agents to be approved by the Engineer.

(b) Construction Method

(i) Formworks

Formworks shall be designed to carry the maximum loads which may be imposed, and so be rigidly constructed as to prevent deformation due to load, drying and wetting, vibration and other causes. After forms have been set in correct location, they shall be inspected and approved by the Engineer before the concrete is placed.

If requested, the Contractor shall submit to the Engineer working drawings of the forms and also, if requested, calculations to certify the rigidity of the forms.

Unless otherwise described in the Contract, all form joints for exposed surfaces of concrete shall form a regular pattern with horizontal and vertical lines continuous throughout each structure and all construction joints shall coincide with these horizontal and vertical lines. PVC pipes

of 50mm diameter for weep holes shall be arranged as shown on the Drawings.

Unless otherwise specified, formwork shall be designed to form chamfers at all external corners whether or not such chamfers are shown on the Drawings to prevent cracks and other damage from arising.

The inside surface of forms shall be cleaned and coated with a releasing agent to prevent adhesion of the concrete. Release agents shall be applied strictly in accordance with the manufacturer's detailed instructions. The release agent shall be applied to the formwork prior to erection. Release agent must not come into contact with reinforcement. Immediately before concrete is placed, the forms shall be thoroughly cleaned and freed from sawdust, shavings, dust, mud or other debris by hosing with water. Temporary openings shall be provided in the forms to drain away the water and rubbish.

(ii) Scaffolding

All scaffolding required to support the forms shall be designed and constructed to provide necessary rigidity and support the loads without appreciable deflection or deformation.

Details, plans and structural and flexural calculations for scaffolding shall be submitted to the Engineer for approval, but in no case shall the Contractor be relieved of his responsibility for the results obtained by use of these plans, etc.

(iii) Removal of Formwork

The time at which the formwork is truck shall be the Contractor's responsibility and the forms shall not be removed until the concrete strength has reached 20 N/mm^2.

(iv) Measurement and Payment

Formwork shall be measured as the net area, in square metres, in contact with the finished concrete surface of the walls and slabs. No measurement shall be allowed for formwork of temporary construction joints.

Payment for the Formworks shall be full compensation for furnishing, erecting, jointing all the forms for the concrete including furnishing and applying release agent, and construction of the required scaffolding to support the forms, all conforming to the shape, lines, grade and dimensions of the structure as shown on the Drawings, all in accordance with the Drawings and as directed by the Engineer.

1703(D) CONCRETE WORKS (CLASS 25/20)

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of culvert walls and slabs, in accordance with these Specifications and in conformity with the requirements shown on the Drawings.

Concrete class 25/20 shall be used for culvert wingwalls and slabs. The requirements of Concrete class 25/20 are provided as follows unless otherwise the Engineer will designate any alteration.

Design compressive strength (28 days)	:	25N/mm^2
Maximum size of coarse aggregates	:	20mm
Maximum water/cement ratio of 45% with slump of 80mm		

a) Concrete Materials

1. Cement:

Cement shall be of Ordinary Portland type and shall conform to the requirements of BS 12 or equivalent.

The Contractor shall select only one type or brand of cement or others. Changing of type or brand of cement will not be permitted without a new mix design approved by the Engineer. All cement is subject to the Engineer's approval, however, approval of cement by the Engineer shall not relieve the Contractor of the responsibility to furnish concrete of the specified compressive strength.

Conveyance of cement by jute bags shall not be permitted. Storage in the Contractor's silo or storehouse shall not exceed more than two (2) months, and age of cement after manufacture at mill shall not exceed more than four months. The Contractor shall submit to the Engineer for his approval the result of quality certificate done prepared by the manufacturer.

Whenever it is found out that cement has been stored too long, moist, or caked, the cement shall be rejected and removed from the project.

2. Aggregates

Fine and coarse aggregates must be clean, hard, strong and durable, and free from absorbed chemicals, clay coating, or materials in amounts that could affect hydration, bonding, strength and durability of concrete.

Grading of aggregates shall conform to the following requirements:

a) Grading of Fine Aggregates

Sieve Size	Percentage by Weight Passing
10 mm	100
6.3 mm	89-100
2.5 mm	60-100
1.2 mm	30-100
0.6 mm	15- 54
0.3 mm	5- 40
0.15 mm	0 - 15

b) Grading of Coarse Aggregates

Size of Coarse Aggregates	40	30	25	20	15	10	5	2.5
Amounts finer than each standard sieve percentage by weight	100	-	-	90-100	-	30-69	0-10	-

c) Other requirements for aggregates are as follows:

i. Fine Aggregates

Fitness Modulus, AASHTO M-6 : 2.3 – 3.1
Sodium Sulphate Soundness, AASHTO T104 : Max. 10% loss
Content of Friable Particles AASHTO 112: Max 1% by weight
Sand Equivalent, AASHTO T176 : Min. 75

ii. Coarse Aggregates

Abrasion, AASHTO T96 : Max. 405 loss
Soft Fragment and shale, AASHTO M80 : Max. 5% by weight
Thin and elongated Pieces, AASHTO M80 : Max. 15%

3. Water

Allsourcesofwatertobeusedwithcementshallbeapprovedbytheengineer. Water shall be free from injurious quantities of oil, alkali, vegetable matter and salt as determinedbytheEngineer.

Description	Nature	BS 3148 Specifications
pH	8.86	4-10
Chloride; ppm	864.4	500 Max
Sulphates; ppm	13.4	1,000 Max
Total alkalinity	610	1,000 Max
Total Dissolved Solids	3,425	2,000 Max

4. Admixture

Only admixture, which have been tested and approved in the site laboratory through trial mixing for design proportions shall be used.

Beforeselectionofadmixture,theContractorshallsubmittotheEngineerthe specific informationorguaranteespreparedbytheadmixturesupplier.

TheContractorshallnotexcludetheadmixturefromconcreteproportions.

a) Proportioning Concrete

The Contractor shall consult with the Engineer as to mix proportions at least thirty (30) days prior to beginning the concrete work.

The actual mix proportions of cement, aggregates, water and admixture shall be determined by the Contractor under supervision of the Engineer in the site laboratory.

The Contractor shall prepare the design proportions which has 120% of the strength requirement specified for the designated class of concrete.

No class of concrete shall be prepared or placed until its job-mix proportions have been approved by the Engineer.

b) Concrete Work

(i) Batching shall be done by weight with accuracy of:

Cement	:	½ percent
Aggregate	:	½ percent
Water and Admixture	:	1 percent.

(ii) Equipment should be capable of measuring quantities within these tolerances for the smartest batch regularly used, as well as for larger batches.

The accuracy of batching equipment should be checked every month in the presence of the Engineer and adjusted when necessary.

(iii) Mixing and delivery

Slump of mixed concrete shall be checked and approved at an accuracy of +25mm against designated slump in these specifications.

(iv) Concrete in hot weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty-three degrees celsius (330c) during placement operations.

(v) Concreting at night

No concrete shall be mixed, placed or finished when natural light is insufficient, unless an adequate approved artificial lighting system is operated, such night work is subject to approval by the engineer.

(vi) Placing

In preparation of the placing of concrete, the interior space of forms shall be cleaned and approved by the Engineer prior to placing concrete. All temporary members except tie bars to support forms shall be removed entirely from the forms and not buried in the concrete. The use of open and vertical chute shall not be permitted unless otherwise directed by the engineer.

The Contractor shall provide a sufficient number of vibrators to properly compact each batch immediately after it is placed in the forms.

c) Measurement and Payment

Measurements for the Concrete Works Class 25/20 of culvert walls and slabs shall be made in cubic metres for the walls and slabs actually constructed, measured from their dimensions shown on the Drawings. Payment for the Concrete Works (Class 25/20) of culvert walls and slabs shall be the full compensation for furnishing all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidental necessary for the completion of the work in accordance with the Drawings and these Specifications and as directed by the Engineer.

SECTION 20 – ROAD FURNITURE

2001 ROAD RESERVE BOUNDARY POSTS

Road reserve boundary posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2001. They shall be placed at 50m intervals along the boundary of the road reserve.

2003 EDGE MARKER POSTS

Edge marker posts shall be provided as directed by the Engineer and in compliance with the requirements of Standard Specification clause 2003.

2004 PERMANENT ROAD SIGNS

Permanent Road Signs shall be provided as directed by the Engineer and in compliance with the requirements of the "Manual for Traffic Signs in Kenya" Part II and standard Specification clause 2004.

2004B EXISTING ROAD SIGNS

Where directed by the Engineer, the Contractor shall take down road signs including all posts, nuts, bolts and fittings, and remove and dispose of the concrete foundation and backfill the post holes. The signs shall be stored as directed by the Engineer.

Measurement and payment for taking down road signs shall be made by the number of signs of any type and size taken down, cleaned and stored as directed.

2005 ROAD MARKING

Paint for road marking shall be internally reflectorised hot applied thermoplastic material in accordance with Clause 219 of the Standard Specification.

The rates inserted in the Bills of Quantities for road marking shall include for prior application of approved tack coat.

2006 GUARDRAILS

Contrary to the Standard Specification, guardrail posts shall be concrete 200 mm diameter set vertically at least 1.2m into the shoulder as directed by the Engineer. Spacer blocks shall also be made of concrete.

Beams for guardrails shall be "Armco Flex-beam" or similar obtained from a manufacturer approved by the Engineer.

2007 KERBS

(a) Vertical Joints

Vertical joints between adjacent kerbs shall not be greater than 5 mm in width and shall have mortar consisting of 1:3 cement: sand by volume.

(b) Transition between flush and raised kerbs

The transition between flush and raised kerbs (e.g., at bus bays) shall be termed as ramped kerbs and shall occur within a length of 2.0m.

2008 KILOMETER MARKER POSTS

Kilometre marker posts shall be provided as directed by the Engineer and in compliance with Standard Specification Clause 2008.

2009 RUMBLE STRIPS

Where directed by the Engineer, the Contractor shall provide, place, trim, shape and compact to line and level asphaltic concrete rumble strips on the finished shoulders. This shall be done to the satisfaction of the Engineer.

2009B BOLLARDS

Where directed by the Engineer, the Contractor shall provide and install class 20/20 200mm diameter reinforced concrete bollards concreted 300mm into the ground.

SECTION 21 – MISCELLANEOUS BRIDGE WORKS

2109 MAINTENANCE OF EXISTING BAILEY BRIDGES

The operation shall consist of but not limited to: -

1. Removal of damaged and unserviceable bridge parts for safe disposal by the Contractor.
2. Replacement of missing, damaged and unserviceable bridge parts.
3. Repair and reuse serviceable bridge parts
4. Removal of rust on the metal parts of the bridge.
5. Application of aluminium- based paint as specified and directed by the Engineer.
6. Any other work that may be deemed necessary by the Engineer.

Payment for this item shall be a Lump Sum rate provided by the Contractor.

SECTION 22 – DAYWORKS

2202 MEASUREMENTS AND PAYMENT

(a) Plant

Where items of major plant listed in the schedule of Day-works are specified by type (e.g., Concrete mixer etc.) the power rating of such items of plant provided by the Contractor shall not be lower than the power ratings of such plant manufactured within the last two years prior to the date of BID. Any item of major plant employed upon Day-works that has a power rating lower than specified above shall be paid for at rates lower than those in the schedule of Day- works. The reduction in the rate payable shall be in proportion to the reduction in power rating below that specified above.

SECTION 23 – PILING WORKS

2301 METHOD STATEMENT FOR INSTALLATION OF BORED CAST IN PLACE PILES

The work shall include preparation of dry working platform for piles to piers P2, T2 and T3, setting out, excavation and drilling of pile shaft, cleaning and inspection of drilled holes, tying, fixing and placing of reinforcement, concreting and head treatment of piles, test pile and testing.

(a) Dry Working Platform

A dry working platform shall be constructed for the piling works to pier P2, T2 and T3

The working platform shall be principally sandy material with a clay core over the perimeter of the pile head area. The working platform shall be protected against any damage that may be caused by rising river levels by sand bags. The top of the working platform shall be in non-cohesive granular material to ensure the top surface of working platform is maintained free from mud and slippery conditions, during piling works.

(b) Test Piles and testing of Piles

(i) Capacity of Test Assembly

The test assembly shall be capable of the safe application of the following loads. The test piles shall be set up at locations be determined by the Engineer or his representative.

Working loads for the piles shall be as follows:

Pier T3: 1200 mm Φ vertical piles	=	4370 KN or 437 tonnes
Pier T2: 1000mm Φ raked piles	=	3575 KN or 358 tonnes
Pier P2: 800 mm Φ vertical piles	=	3610 KN or 362 tonnes

Testing of the piles shall be carried out to 2 times the working loads.

(ii) Test Assembly

The layout of the test assembly to be used is shown on drawing attached. The test assembly will be constructed and supported such that safe access to all parts of the assembly may be made at all times during a test. The force to load the pile shall be provided by jacking against the reaction of four tension piles.

1. Tension Piles

At least four tension piles shall be used for each test assembly. Working piles will not be used as tension piles unless approved by the Engineer. If working piles are used the movement shall be measured to within an accuracy of 0.5mm. Ground Anchors will not be used.

2. Method of Applying Load to the Test Piles

The test force shall be applied concentrically to the test pile by means of a single hydraulic jack. The permissible extension of the jack will be such that for each trial pile the pile can be moved continuously and without repacking for a

distance 15% of the test pile base diameter. Allowance will be made for "take-up" of the reaction assembly.

3. Measurement of Load

The whole load will be measured by a single load cell or proving ring calibrated in divisions not exceeding 1% of the maximum load to be applied. The load cell or proving ring shall be calibrated immediately prior to the test and a certificate of calibration will be submitted to the Engineer. All increments of load shall not be allowed to fall below 1% of the specified load. Further calibration will be made after each series of tests whenever adjustments are made to the devices.

4. Measurement of Pile Movement by Dial Gauges

Vertical movement shall be measured by four-gauge extensometers having 50 mm travel and graduated in 0.01 mm divisions. Dial gauge readings shall take precedence over precise level measurements on the test pile for the purpose of this test.

The extensometers shall be positioned mutually at right angles and at equal distance from the centre of the test pile. The plungers of the extensometers shall bear on plane glass or machined metal plates set level.

5. Protection of the Test Assembly

The entire measuring assembly may be protected throughout testing against rain, direct sunlight and any other disturbance that could affect the reliability of readings. Construction equipment and persons who are not involved in the testing shall be kept away from the test to avoid disturbance to the measurement apparatus.

(iii) Test Procedure

1. Concrete Strength

Pile selected for testing shall not be loaded until the concrete strength as shown by cube tests or rebound hammer, to be at least twice the pile stress at the greatest test load (ignoring any reinforcement) or the pile concrete is at least twenty-eight days old whichever gives the longer period of time.

2. Supervision of Tests

The contractor will keep the tests under continuous and competent supervision to the satisfaction of the Engineer. The contractor shall give the engineer 3 days' notice before the commencement of the tests.

3. Facilities for the Engineer

All necessary facilities will be provided to enable the Engineer to take and check readings during the progress of the tests.

4. Dial Gauge Readings

Dial gauge readings of pile movement will be made at frequent intervals during each pile loading cycle as agreed with the Engineer.

5. Rate of vertical Movement Defining Settlement

Each increment of load is to be maintained until the rate of settlement does not exceed 0.2 mm in half an hour measured over a half hour interval and the amount of settlement shall be that recorded when this rate is reached. The maximum load shall be maintained for 6 hours on the final load cycle prior to unloading.

6. Test Load Cycle

Loading and unloading will be made in the following sequence and for the given durations. For each application of the loads the load shall be held for the lesser of the period shown or until the rate of the settlement is less than 0.25mm/hr and slowing down.

Load Percentage of Holding Load	Minimum Time of Working Load
25	1 hour
50	1 hour
75	1 hour
100	1 hour
75	10 Min
50	10 Min
25	10 Min
0	1 hour
100	1 hour
125	1 hour
150	1 hour
175	1 hour
200	6 hours
175	10 Min
150	10 Min
125	10 Min
100	10 Min
50	10 Min
25	10 Min
0	10 Min
0	1 hour

7. Test Reports

At the conclusion of work each day the contractor will send to the Engineer a copy of the daily record sheets of all records of the tests. The schedule of record data shall be as indicated in clause 2115.15 (b) of the special specifications.

(c) Order of Piling Works

The Engineer will be given at least five days before installation of test piles. Prior to the installation of foundation piles, the test pile with four anchor piles will be installed at a location to be determined by the Engineer.

A working program on the order of pile installation shall be given to the Engineer one week before works on the piles is started. Piling will be carried out first on Southern side followed by Northern side. Piling will be carried out on Pier piles followed by Abutment piles. Any changes in the works program will be advised to the Engineer in good time before they are implemented.

(d) Setting Out

The pile locations will be set out, from the pier and abutment bearing centres as established accurately for the bridge alignment. Setting out shall be by use of Distomat and theodolite. Each point will be marked clearly with steel pegs and protected against interference. Prior to piling the Engineer's approval will be required for the setting out.

(e) Excavation and Drilling of Pile Shaft

Excavation of the pile shaft shall be by anger boring. This shall be carried out inside a temporary steel casing and shall be supplied for the full length of the bore.

The bottom of the temporary casing shall be kept sufficiently far below the boring to prevent the inflow of soil and the formation of cavities in the surrounding ground. A recommended depth of 1.5m will be adopted subject to the approval of the Engineer.

Soils removed from the pile borehole will be examined and compared with the description stated on the site investigation borehole records.

The sequence of excavation of the pile shafts shall be agreed with the Engineer prior to the boring. This will be set out in order to ensure that newly concreted piles are not affected by boring in adjacent ground.

(f) Cleaning and Inspection of Hole

On completion of the drilling of the pile shaft, the hole will be cleaned to remove all loose material and foreign matter existing at the bottom of the hole. The bored hole shall be checked for verticality to ensure that the tolerances and depths of pile required have been achieved.

Physical inspection of the hole shall be made by providing adequate lighting, down the shaft.

(g) Reinforcement

The reinforcement cage shall be cut, tied and fixed prior to the completion of the boring to suit the pile length and head. Concrete spacer blocks for the base of the steel cage and sides will ensure cover to reinforcement. These will be adequately provided, but in no case lesser than 3-meter intervals.

Minimum lap lengths shall be maintained as stated in the drawings or as directed by the Engineer. In order to prevent failure of the re-bar cage joints due to its own weight or on impact with the bottom of the excavation, guide hoops shall be bound sufficiently or intermittent fillet welds shall be used on the corresponding bars at the lap joints as directed by the Engineer.

(h) Concreting

Concrete shall be mixed in accordance with the requirements of section 17 of the Standard Specification of Roads and Bridge construction 1986, and conforming to material requirements, slump and strength specifications given in the drawings.

The concrete shall be poured by means of a tremie pipe of internal diameter 150mm. During the placing of concrete, the bottom of the tremie pipe will be maintained at least 2m into the newly placed concrete.

The finished level of the concrete shall be at least 1 meter higher than the design cut off level to permit the removal of laitance formed at the top of pile and to facilitate effective head treatment.

The temporary casing shall be withdrawn after the concreting of the shaft in stages and as agreed with the Engineer.

The holes forming the free bore from top of pile to the ground level shall be filled with clay material, upon completion of concrete works.

(i) Levelling Concrete

On completion of piling, the ground around the pile cap shall be excavated to the level of the bottom of the pile cap protected by a cofferdam. Levelling concrete class 20/20 shall be placed on the bottom of the excavation of the cofferdam, by use of a tremie pipe to help pump out water inside the cofferdam. The bottom of the cofferdam shall thereafter be maintained dry by continuous pumping from sumps to facilitate head treatment and concreting of pile cap.

(j) Pile Head Treatment

After the levelling concrete has hardened and the cofferdam has been dewatered by pumping, the top surface and head of pile shall be cut and cleaned to the design cut off level to prepare for the steel fixing and concrete casting of the pile cap.

(k) Sheet Piles and Their Installation on Pier T3

Pile driving shall by use of a vibro head powered by a hydraulic system. On completion of the excavation of piles heads, the vibro head shall be set up and sheet piles assembled and driven in place. The level of the sheet piles to be driven shall be determined by the Engineer.

The sheet piles to be used shall be Frodingham or other similar of dimensions shown in the drawing. The sheet piles shall be coated with tar to the approval of the Engineer.

2302 BORED CAST IN PLACE PILES

Material and Workmanship

a) Bentonite

If necessary, the Engineer shall instruct Contractor to use bentonite for the support sides of the hole. If bentonite is used it shall comply with Publication 163: Drilling fluid materials of the Engineering Equipment and Materials Users Association.

A certificate shall be obtained by the Contractor from the manufacturer of the bentonite powder, showing the properties of each consignment delivered to the Site. This certificate shall be made available to the Engineer on request. The properties to be given by the

manufacturer are the apparent viscosity range (in centipoises) and the gel strength range (in newtons per square meter) for solids in water.

Bentonite shall be mixed thoroughly with clean fresh water to make a suspension which will maintain the stability of the pile excavation for the period necessary to place concrete and complete construction. The temperatures of the water used in mixing the bentonite suspension, and of the suspension when supplied to the borehole, shall be not lower than 5°C.

Where saline or chemically contaminated groundwater occurs, special precautions shall be taken to modify the bentonite suspension or pre-hydrate the bentonite in fresh water so as to render it suitable in all respects for the construction of piles.

The frequency of testing drilling fluid and the method and procedure of sampling shall be proposed by the Contractor prior to the commencement of the work. The frequency may be subsequently be varied as required, depending on the consistency of the results obtained.

Control tests shall be carried out on the bentonite suspension, using suitable apparatus. The density of freshly mixed bentonite suspension shall be measured daily as a check on the quality of the suspension being formed. The measuring device shall be calibrated to read to within 0.005 g/ml. Tests to determine density, viscosity, shear strength and pH value shall be applied to bentonite supplied to pile boring. For average soil conditions the results shall generally be within the ranges stated in Table 2114-1. The tests shall be carried out until a consistent working pattern has been established, account being taken of the mixing process, any blending of freshly mixed bentonite suspension and previously used bentonite suspension and any process which may be used to remove impurities from previously used bentonite suspension. When the results show consistent behaviour, the tests for shear strength and pH value may be discontinued, and tests to determine density and viscosity shall be carried out as agreed with the Engineer. In the event of a change in the established working pattern, tests for shear strength and pH value shall be reintroduced for a period if required.

Table 2114-1

Property to be Measured	Test Method	Range of Results at 20°C
Density	Less than 1.10 g/ml	Mud density balance
Viscosity	30 – 90s or less than 20cP	Marsh cone method Fann Viscometer
Shear Strength	1.4 – 10N/m^2 or (10-minute gel strength)	Shearometer 4-40 N/m^2 Fann Viscometer
pH	9.5 – 12	pH indicator paper strips or electrical pH metre to BS3445

b) Steel Reinforcement

Reinforcement shall comply with Section 17 of the Standard Specification. It shall be made up into rigid cages which will not distort during installation or when placing concrete. Longitudinal bars up to 12 meters shall be in single lengths. Joints in longer bars shall be formed by lapping as specified in the drawing or acceptable to the Engineer. The number of joints in longitudinal steel bars shall be kept to a minimum. Joints in steel reinforcement shall be such that the full strength of each bar is effective across the joint and shall be made so that there is no detrimental displacement of reinforcement during the construction of the pile, following the guidance of BS 8110. Reinforcement shall be maintained in its correct position during concreting of the pile, to allow a vertical tolerance of +150/-50 mm on the level of the reinforcement projecting above the final cut-off level. Joints shall be staggered along the length of the cage. Cover to reinforcement shall be not less than 50 mm except at bottom base of pile where minimum cover shall be 100mm. Spacers shall be designed and manufactured using durable materials which shall not lead to corrosion of the reinforcement or spalling of the concrete cover.

c) Concrete

Concrete shall be of the class 35/20 and shall comply with Section 17 of the Standard Specification.

The consistency of the concrete and the shape of the aggregates shall be suitable for placing and for properly filling the voids formed in the ground to ensure that a dense homogenous pile is produced, having regard to the method of compaction inherent in the type of piling system adopted. If necessary, the concrete shall be suitable for self- compaction without segregation. The workability and method of placing of the concrete shall be such that a continuous monolithic concrete or grout shaft of the full cross-section is formed. Concrete shall be transported from the mixer to the pile in such a manner that segregation of the mix does not occur. The concrete shall be placed without such interruption as would allow the previously placed batch to have achieved a stiffness which prevent proper amalgamation of the two concrete batches.

Table 2114-2: Piling Mix Workability

Piling Mix Workability	Workability Target Flow, mm	Workability Slump Range, mm	Typical Conditions of Use (The concrete and aggregate sizes must be compatible with reinforcement spacing)
A	Not Applicable	75 – 125	Placed into water free unlined or permanently lined bore of 600mm diameter or over, or where casting level lies below temporary casing; reinforcement spaced at 100mm centres or greater leaving ample room for free movement of concrete between bars.
B	Target flow 500 +/- 50	Slump 100 – 175	Where reinforcement is spaced at less than 100 centres; where cut off level of concrete is within temporary casing; where pile bore is water free and the diameter is less than 600mm.
C	Target flow 550 +/- 50	Slump 150 or more	Where concrete is to be placed by tremie under water or support fluid or by pumping or by continuous flight auger.

Workability measured at the time of discharge into the pile bore shall be in accordance with the limits shown in Table 2114-2.

Internal vibrators shall not be used to compact concrete. The cement content in any mix shall be not less than 400 kg/m^3.

d) Sequence of Forming Piles

The sequence and method of forming piles shall be acceptable to the Engineer. Where there is evidence that the sequence of construction adversely affects piles which have already been installed, the Engineer may require the Contractor to revise the sequence.

e) Forming Holes for Piles

Holes shall be formed vertically or to the rake shown on the drawings within the tolerances stated in Clause 2110.2. The position of completed holes shall be checked and agreed with the Engineer before any concrete is placed therein.

No hole shall be bored within a distance of three diameter of a recently constructed pile until the concrete in that pile is at least three days old.

During boring, samples of the spoil arising and of the ground water shall be taken as instructed by the Engineer, placed in clearly labelled polythene bags and transported to a laboratory nominated by the Engineer.

Adequate precautions shall be taken at all times by the use of casings or other means including the use of bentonite to prevent the surrounding material and excessive quantities of surface and ground water entering the holes during the construction of piles.

Temporary casings used in boreholes shall be of uniform cross-section and free from significant distortion throughout their length and from any projections or the like which might prevent withdrawal or cause damage to the pile during withdrawal. The Contractor is expected to exercise extra caution when withdrawing temporary casings from raked piles.

When holes are bored with bentonite the level of the bentonite shall be kept high enough to prevent any flow of groundwater into the hole. If a rapid loss of bentonite from the hole occurs, boring shall immediately cease and the Engineer shall be informed.

All reasonable steps shall be taken to prevent the spillage of bentonite suspension on the Site in areas outside the immediate vicinity of boring. Disposal of bentonite shall comply with the regulations of the local controlling authority.

Water shall not be pumped from boreholes unless the source of the water has first been sealed with a lining or plug.

Any unexpected change in ground characteristics shall be immediately reported to the Engineer and any change in the procedure for forming holes which are thereby made necessary shall be agreed with the Engineer.

An enlarged base mechanically formed shall not be smaller than the dimensions specified and shall be concentric with the pile shaft to within a tolerance of 10% of the shaft diameter. The sloping face of the frustrum forming the enlargement shall make an angle

to the horizontal of not less than 55^{o} except where the gross end-bearing pressure does not exceed 400 kN/m^{2}, when it may be reduced to 45^{o}.

f) Inspection of Holes for Piles

All holes shall be subject to approval by the Engineer prior to concreting, and the Contractor shall inform the Engineer immediately after completion of the excavation of each hole.

All loose and disturbed soil, slurries and contaminated material shall be removed from the shaft and base of each pile. All linings and casings shall be smooth and clean and free from adhering concrete.

The holes shall be de-watered whenever possible in cases where the subsequent ingress of water can be prevented, unless in the opinion of the Engineer de-watering might lead to disruption of the ground or prejudice the formation of a sound pile.

The Contractor shall provide all reasonable facilities including lights, binoculars and any other equipment to enable the Engineer to inspect the holes and to take any measurements that he may require.

g) Concreting Piles

The time interval between completion of boring and placing concrete shall be as short as possible, and in any case shall not be longer than 6 hours.

Concrete shall be placed in accordance with the requirements of Section 17 of the Standard Specification without causing segregation. Care shall be taken to ensure that the concrete at the bottom of the piles is not deficient in cement.

Wherever possible, concrete shall be placed in the dry. Where holes cannot be dewatered or where after de-watering the ingress of water would prejudice the formation of a sound pile, the concrete shall be placed under water or bentonite and the concrete mix and strength shall be adjusted as specified or as agreed by the Engineer.

When placing concrete in the dry, it shall be discharged into a conical hopper, with a short length of pipe attached, placed centrally over the head of the tremie unless otherwise approved and shall not be discharged freely into the water or drilling fluid. Before placing concrete, measures shall be taken to ensure that there is no accumulation of silt or other material at the base of the boring and the Contractor shall ensure that heavily contaminated bentonite suspension shall be taken from the base of the boring using an approved sampling devise. If the specific gravity of the suspension exceeds 1.25 the placing of concrete shall not proceed. In this event the Contractor shall modify or replace the bentonite as approved to meet the Specification.

During and after concreting care shall be taken to avoid damage to the concrete from pumping and dewatering operations.

The hopper and pipe of the tremie shall be clean and watertight throughout. The pipe shall extend to the base of the boring and sliding plug or barrier shall be placed in the pipe to prevent direct contact between the first charge of concrete in the pipe of the tremie and the water or drilling fluid. The pipe shall at all times penetrate the concrete which has previously been placed within a minimum embedment of 3m and shall not be withdrawn

from the concrete until completion of concreting. At all times a sufficient quantity of concrete shall be maintained within the pipe to ensure that the pressure from it exceeds that from the water or drilling fluid. The internal diameter of the pipe of the tremie shall be not less than 150mm for concrete made with 20mm aggregate and not less than 200mm for concrete made with 40mm aggregate. It shall be so designed that external projections are minimized allowing the tremie to pass through reinforcing cages without causing damage. The internal face of the pipe of the tremie shall be free from projections.

Concrete in the pile shall be placed in one continuous operation. Precautions shall be taken to ensure that the concrete shall be sound and of full cross-section throughout. Where concreting is interrupted, the Contractor shall inform the Engineer immediately and shall carry out such measures as the Engineer may require. No spoil, liquid or other foreign matter shall be allowed to contaminate the concrete.

Any temporary lining tubes shall be withdrawn during concreting while the concrete is still workable and in such a way that no voids are produced and the stability of the hole is maintained.

The inflow of ground water shall be prevented by maintaining adequate head of concrete or by other means acceptable to the Engineer. Piles will not be accepted where there has been flow of ground water through or against unset concrete. The level of concrete shall at all times be at least one meter above the bottom of the lining tube.

The Contractor shall ensure that the concrete up to the cut-off level is sound and free from laitance, and he shall finish the concrete at least 300mm and not more than one meter above the specified cut-off level of any pile is to be below the standing water table, the concrete shall be cast to a minimum of 150mm above the water table.

h) Protection of Pile Heads

When the casting level of piles is below existing ground level the remaining empty bore shall be temporary backfilled with suitable material unless otherwise instructed by the Engineer.

i) Unsatisfactory or Incorrectly Positioned Piles

The effects of piles which have departures from position or alignment in excess of those permitted by the Specification or are considered unsatisfactory for any other reason shall be remedied by the Contractor in a manner acceptable to the Engineer.

All condemned or abandoned holes for piles shall be back-filled with concrete up to the cut-off levels or other level acceptable to the Engineer at the Contractor’s expense.

j) Preparation of Pile Heads

Pile heads shall be prepared for incorporation into the Permanent works by cutting the concrete back to a sound surface at the required level without damaging the reinforcement. All dust and loose concrete shall then be removed. The length of reinforcement available for splicing shall not be less than 50 diameters.

k) Records

In addition to the piling records required under Clause 2109 of the special specification, the following information for bored cast–in-pace is also to be submitted: -

a) Type of equipment used and method of boring;
b) Temporary casing, method of installation and extractions;
c) Strata encountered during boring;
d) Details of enlarged (if any);
e) Standing ground water level;
f) Date of concreting;
g) Length of temporary casing;
h) Details of bentonite fluid used;
i) Details of soil samples taken and insitu tests carried out;
j) Details of reinforcement;
k) Method of placing concrete and conditions pertaining;
l) Details of concrete, including concrete mix, aggregate type and source, cement type, slump and cube test results.
m) Amount of concrete used in pile;
n) Concrete level before and after extraction of casing.

l) Testing of Piles

Installation and testing of piles shall be carried out as specified in Clause 2115 of the Special Specification.

Working loads for the piles shall be as follows: -

Piers T3, T2, & P2

i. 1200mm Φ vertical piles on pier T3 : 4370 KN
ii. 1000mm Φ raked (5:1) piles on pier T2 : 3575 KN
iii. 800 mm Φ vertical piles on pier P2 : 3610 KN

m) Measurements and Payments

Measurement and payments shall be made as specified in the special specifications and indicated in the Bills of quantities.

SECTION 25 – HIV/AIDS, GENDER ISSUES, SOCIAL ISSUES AND LOCAL PARTICIPATION

2501 SCOPE

This specification sets out the Contractor's obligations with regard to on-site HIV/AIDS awareness campaign and preventive measures, which are to be instituted. The Contractor shall institute an HIV/AIDS awareness campaign amongst his workers for the duration of the Contract.

- Scope of Activities

Activities for HIV/AIDS awareness campaigns and prevention will be broad-based, targeting both individuals and groups. They may consist of: -

(i) Information posters in public places, both on and offsite (eating houses, bars, guest houses, etc.) and on contractor's vehicles.
(ii) Availability of socially marketed condoms
(iii) Peer educators (reference people) drawn from the local labour and educated in HIV/AIDS issues for discussions with colleagues (estimate 1 per 100 employees).
(iv) Small focus group discussions to disseminate information covering key issues.
(v) Theatre groups and video presentations.
(vi) Promotional events (such as football matches) to encourage openness and discussion of HIV/AIDS issues.
(vii) Promotional billboards to raise awareness of the integration of construction and HIV/AIDS activities.
(viii) Inclusion of HIV/AIDS activities at site meetings with District Aids Committee and other approved representatives.
(ix) Availability of promotional materials such as T-shirts, caps, bumper stickers, key rings etc.

- Objective

The Objective of the HIV/AIDS training programme is to reduce the risk of exposure to and spread of the HIV virus in the area influenced by the construction. The target group will be local labourers and their supervisors employed by the works contractors. The wider community will benefit indirectly through their normal day-to-day interaction with the target group.

2502 GENERAL REQUIREMENTS

a) Publicity

(i) <u>Posters</u>

As part of the campaign the Contractor will be required to display AIDS awareness posters in all buildings frequented by workers employed on the Contract where such buildings fall under the control of the Contractor. In addition, at least ten (10) of The Contractor's vehicles, regularly used on site shall display HIV/AIDS awareness posters. The posters shall be printed on gloss paper and shall be at least A1 size on buildings and A3 size, or other

approved size on vehicles. The message on the posters to be proposed by the contractor shall be approved by the Engineer before the posters are printed.

The contractor shall be responsible for the maintenance and replacement of such posters during the contract period.

(ii) T-shirtsandCaps

Contractor shall provide to be used by selected staff members continually during the contract period T-shirts and caps bearing messages approved by the Engineer.

(iii) VideoShows

Contractor shall make arrangements for educative video shows at least every two (2) months during the contract implementation. The videos shall be those approved by the Ministry of Health for use in public awareness.

(iv) HIV/AIDSAwarenessRoadSigns

Contractor shall provide and erect HIV/AIDS awareness permanent road signs of surface area not less than $4m^2$ and not more than 5m2. The specifications and payments for such signs shall be in accordance with Section 20 of both Standard and Special Specifications.

b) Condoms

As part of the campaign the Contractor will be required to make condoms available to workers. The condoms shall be from those approved by the Ministry of Health (Kenya). The Contractor shall make available at least 2,000 male and 200 female condoms every month, through dispensing machines or other approved method of distribution. The Contractor shall at all times keep the site adequately supplied with such condoms during the contract period.

c) Training

HIV/AIDS activities are co-ordinated nationally by the National Aids Control Council (NACC). The Contractor, in consultation with NACC and the Ministry of Health (MOH), will co-ordinate with the provincial, district and local representatives. In carrying out training of all staff involved in the construction activities. The trainers consisting of persons of different disciplines and being experts in AIDS and HIV issues shall include of at least 1 counsellor.

Activities on the construction site will be linked as far as possible with on-going HIV/AIDS awareness and prevention in the area. This will ensure complementarity of approaches, reinforcing education and minimizing duplication. In addition, these links will ensure that the target group will have access to continued information after the end of the construction period.

Activities on the construction site will be linked as far as possible with on-going HIV/AIDS awareness and prevention in the area. This will ensure complementarity of approaches, reinforcing education and minimizing duplication. In addition, these links will ensure that the target group will have access to continued information after the end of the construction period.

The training sessions shall cover among others the following:

(i) Preventive behaviours including partner reduction, condom use, awareness and appreciation of the importance of treatment of sexually transmitted incidences (STIs);

(ii) Skills including negotiating safer sex, correct condom use, purchase of condoms without embarrassment; and referral to local health centres and available services.

(iii) Establishing the status and focus of all current and planned HIV/AIDS activities in the area to ensure complementarity and determining potential involvement in project activities.

(iv) Carrying out a brief review of regional activities combining road construction

(v) With etc. HIV/AIDS campaigns to determine options, best practice key issues, constraints

(vi) Reviewing of Information, Education and Communication (IEC) materials

(vii) Available and their relevance to road construction, making recommendations for future development of IEC materials.

(viii) Providing education and training for site personnel, supervisors and peer

(ix) educators for the scope of activities as above.

(x) Providing supervision for peer educators to ensure sustained quality of education. Incentives for their continual work may be small promotional items such as T –shirts, Caps etc.

(xi) Providing mechanism for the social marketing of condoms and distribution of materials.

(xii) Monitoring activities regularly to assess effectiveness and impact. This should Include an initial, interim and final assessment of basic knowledge, attitude and practices (KAP) taking account of existing data sources and recognizing the limitations due to the short time frame to show behaviour change. The KAP will be supported by qualitative information from focus group discussions.

The training sessions shall be conducted once every two months during the contract implementation.

d) Timing

Activities shall commence at the start of the construction period and continue throughout the contract period to ensure a sustained impact.

2503 MEASUREMENTS AND PAYMENTS

(i) Posters

Unit: Number (No.)

Payment: Payment rate for posters shall be by the Number (No.) placed or replaced upon the instructions of the Engineer.

(ii) T-ShirtsandCaps

Unit: A complete Set of T-Shirt and Caps (Set)

Payment: Payment rate for T-shirts and Caps shall be by the set of T-Shirts and Caps instructed by the Engineer.

(iii) VideoShows

Unit Number (No.)

Payment: Payment rate for video shows shall be the number (No.) of shows carried out. The rates shall include all the arrangements necessary to achieve the same.

(iv) Condoms

Unit: Number (No.)

Payment: Payment rates shall by the number of condoms provided by the Contractor. The rate shall include the provisions and maintenance of appropriate and approved dispensers.

(v) Training

Unit: Session

Payment: Payment rate shall be by the number of sessions conducted. The rate shall include allowancepayable,lunches,transport,tenthires,anypublicaddresssystemetc necessaryfor conducting an effectivepublictraining.

SECTION VII - BILLS OF QUANTITIES

PREAMBLE TO BILL OF QUANTITIES

1. The Bills of Quantities forms part of the Contract Documents and are to be read in conjunction with the Instructions to Bidders, Conditions of Contract Parts I and II, Specifications and Drawings.

2. The brief description of the items in the Bills of Quantities is purely for the purpose of identification, and in no way modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.

3. The Quantities set forth in the Bills of Quantities are estimated, representing substantially the work to be carried out, and are given to provide a common basis for bidding and comparing of Bids. There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities. The basis of payment shall be the Contractor's rates and the quantities of work actually done in fulfilment of his obligation under the Contract.

4. Payments for emergency and/or instructed works will be paid as and when they occur using submitted rates and/or day works and shall require prior approval of the Employer.

5. The prices and rates inserted in the Bills of Quantities will be used for valuing the work executed, and the Engineer will only measure the whole of the works executed in accordance with this Contract.

6. A price or rate shall be entered in ink against every item in the Bills of Quantities with the exception of items that already have Provisional sums affixed thereto. The bidders are reminded that no “nil” or “included” rates or “lump-sum” discounts will be accepted. The rates for various items should include discounts if any. Bidders who fail to comply will be disqualified.

7. Provisional sums (including Day-works) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer.

8. The price and rates entered in the Bills of Quantities shall, except in-so-far as it is otherwise provided under the Contract, include all Constructional plant to be used, labour, insurance, supervision, compliance testing, materials, erection, maintenance of works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the contract by the Engineer and his staff.

9. Unless otherwise stated, all measurements shall be net taken on the finished work carried out in accordance with the details shown on the drawings or instructed, with no allowance for extra cuts or fills, waste or additional thickness necessary to obtain the minimum finished thickness or dimensions required in this Contract. Any work performed in excess or the requirements of the plans and specifications will not be paid for, unless ordered in writing by the Engineer.

10. Unbalanced tenders and/or unrealistic rates shall lead to the tenderer being subjected to enhanced Perfomance Security requirements pursuant to Instruction to Tnderers section 38.2 (b) of Tender Data Sheets.

Bills of Quantities are Annexed herewith.

PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION X - GENERAL CONDITIONS OF CONTRACT

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 acurrency in which part (orall) 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].

1.2 Interpretation

In the Contract, except where the context requires otherwise:

a) Words indicating one gender include all genders;
b) words indicating the singular also include the plural and words indicating the plural also include the singular;
c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;
d) "written" or "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."

1.3 Communications

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

a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the **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.

1.4 Law and Language

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

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

1.5 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.

1.6 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.

1.7 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.

1.8 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.

1.9 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-Clause15.6 (Fraud and Corruption) which provides, interalia, 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 aresult 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 been titled subject toSub-Clause20.1 [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-Clause3.5 [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.

2.3 Procuring Entity's Personnel

The Procuring Entity shall be responsible for ensuring that the Procuring Entity's Personnel and the Procuring Entity's other 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].

2.4 Procuring Entity's Financial Arrangement

2.4.1 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.

2.4.2 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.

2.5 Procuring Entity's Claims

2.5.1 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.

2.5.2 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.

2.5.3 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.

3.1.2 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.

3.1.2 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-Clause13.1: 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-Clause13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause13.1or13.2.

d) Sub-Clause13.4: Specifying the amount payable in each of the applicable currencies.

3.1.3 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 Contract or 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

3.2.1 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-Clause3.5 [Determinations].

3.2.2 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the 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.

4.1.6 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.

4.1.7 If the Contract specifies that the Contract or 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 thev purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

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

4.2.2 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.

4.2.3 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 Contract or 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.

4.2.4 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.

4.2.5 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.

4.2.6 The Procuring Entity shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.

4.2.7 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or are duction 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.

4.3 Contractor's Representative

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

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 interms 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.

4.3.2 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.

4.3.3 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.

4.3.4 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

4.4 Subcontractors

4.4.1 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-Clause15.2 [Termination by Procuring Entity].

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

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

4.5 Assignment of Benefit of Subcontract

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

4.6 Co-operation

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

4.6.2 Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or 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.

4.7 Setting Out

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

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

4.7.2 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.

4.7.3 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 thise.

4.8 Safety Procedures

The Contractor shall:
a) Comply with all applicable safety regulations,
b) Take care for the safety of all persons entitled to be on the Site,
c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstructions as to avoid danger to these persons,
d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause10 [Procuring Entity's Taking Over], and
e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 Quality Assurance

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 Contract or 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.

4.12.5 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.

4.12.6 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. TheContractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which hemay 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

TheContractorshallbedeemedtohavebeensatisfiedastothesuitabilityandavailabilityofaccessroutestothe SiteatBaseDate.TheContractorshallusereasonableeffortstopreventanyroadorbridgefrombeingdamaged 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.

4.17 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.

4.18 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.

4.19 Electricity, Water and Gas

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

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.

4.20 Procuring Entity's Equipment and Free-Issue Materials

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

a) The Procuring Entity shall be responsible for the Procuring Entity's Equipment, except that

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

4.20.2 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 theProcuring 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 materialsc 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.

4.21 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; andincluding 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.

4.21.3 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.

4.22 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.

4.23 Contractor's Operations on Site

4.23.1 The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the 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.

4.23.2 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.

4.24 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 Subcontract or 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 Subcontract or 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].

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

6. STAFF AND LABOR

6.1 Engagement of Staff and Labor

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

6.2 Rates of Wages and Conditions of Labor

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

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

6.3 Persons in the Service of Procuring Entity

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

6.4 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.

6.5 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.

6.6 Facilities for Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities 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.

6.7 Health and Safety

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

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

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

6.8 Contractor's Superintendence

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

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

6.9 Contractor's Personnel

6.9.1 The Contractor's Personnel 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.

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

6.10 Records of Contractor's Personnel and Equipment

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

6.11 Disorderly Conduct

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

6.12 Foreign Personnel

6.12.1 The Contractor 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 Contract 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.

6.20 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.

6.21 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 Contract or shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

6.22 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].

6.23 Workers' Organizations

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

6.24 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.

7.3.2 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.

7.4 Testing

7.4.1 This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).

7.4.2 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and 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.

7.4.3 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 ofTime for Completion], and

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

7.4.4 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.

7.5 Rejection

7.5.1 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the 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.

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

7.6 Remedial Work

7.6.1 Notwithstanding any previous test or certification, the 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.

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

7.6.3 If the Contractor fails to comply with the instruction, 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-Clause14.2 [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].

8.3 Programme

8.3.1 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 ofeach 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 Contract or intends to adopt, and of the major stages, in the execution of the Works, and

ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

8.3.2 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.

8.3.3 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].

8.3.4 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.

8.4 Extension of Time for Completion

8.4.1 The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause10.1 [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.

8.4.2 If the Contractor considers itself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the 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.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in 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].

8.6 Rate of Progress

8.6.1 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.

8.6.2 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.

8.7 Delay Damages

8.7.1 If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to notice under Sub-Clause 2.5 [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 everyday which shall elapse between the relevant Time for Completion and the date stated in the Taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the **SCC**.

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

8.8 Suspension of Work

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.

8.9 Consequences of Suspension

8.9.1 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 been titled 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.

8.9.2 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 Clause13 [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.

9.4 Failure to Pass Tests on Completion

9.4.1 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the 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.

9.4.2 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 Contract or 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 isissued:

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.

10.2.2 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 onCompletion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

10.2.3 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.

10.2.4 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 orSection (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.

10.3 Interference with Tests on Completion

10.3.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which 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.

10.3.2 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.

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

10.4 Surfaces Requiring Reinstatement

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

11. Defects Liability

11.1 Completion of Outstanding Work and Remedying Defects

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] orSub-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 defector 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-Clause3.5 [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 Contractor 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 hey 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 extentof 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.

12.1.2 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.

12.1.3 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.

12.1.4 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.

12.2 **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.

12.3 Evaluation

12.3.1 Except as otherwise stated in theContract, the Engineer shallproceed 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.

12.3.2 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 fo rthis 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.

12.3.3 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.

12.3.4 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.

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

12.4 Omissions

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

a) the Contractor will incur (or has incurred) cost which, if the work had not been omitted, 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.

13.2 Value Engineering

13.2.1 The Contract or 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.

13.2.2 The proposal shall be prepared at the cost of the Contract or 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.

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

13.3 Variation Procedure

13.3.1 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 toSub-Clause 8.3 [Programme] and to the Time for Completion, and
c) the Contractor's proposal for evaluation of the Variation.

13.3.2 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.

13.3.3 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.

13.4 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-Clause 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 Not withstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account inthe index ing 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:

Pn = a + b Ln/ Lo + c En/Eo + d Mn/Mo + where:

"Pn"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;

"Ln", "En", "Mn", … 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

"Lo", "Eo", "Mo", … 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.

13.8.4 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.

13.8.5 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.

13.8.6 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.

13.8.7 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.

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

14. CONTRACT PRICE AND PAYMENT

14.1 The Contract Price

14.1.1 Unless otherwise stated in the 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.

14.1.2 The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.

14.1.3 Not withstanding 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.

14.2 Advance Payment

14.2.1 The Procuring Entity shall make an advance payment, as an interest- free loan for mobilization and cashflow support, when the Contractor submits a guarantee in accordance with this 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.

14.2.2 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.

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

14.2.4 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.

14.2.5 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.

14.3 Application for Interim Payment Certificates

14.3.1 The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in aform approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to been titled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].

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

a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the **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-Clause14.5[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.

14.3.3 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 priceX100*.

14.4 Schedule of Payments

14.4.1 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-Clause14.5[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.

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

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

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

14.5.2 If the lists referred to in sub-paragraphs (b) (i) or (c) (i) below are not included in the Schedules, this Sub-Clause shall not apply. 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.

14.5.3 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.

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

14.6 Issue of Interim Payment Certificates

14.6.1 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the 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.

14.6.2 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.

14.6.3 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.

14.7 Payment

14.7.1 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].

14.7.2 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.

14.8 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.

14.9 Payment of Retention Money

14.9.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the 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.

14.9.2 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.

14.9.3 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.

14.9.4 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].

14.9.5 Unless otherwise stated in the 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.

14.9.6 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 isissued 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 Contractor 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”.

14.11.3 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

15.2.1 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.

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

15.2.3 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.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the 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.

15.4 Payment after Termination

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

a) Proceed in accordance with Sub-Clause 2.5 [Procuring Entity's Claims],

b) Withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Procuring Entity, have been established, and/or

c) Recover from the Contractor any losses and damages incurred by the Procuring Entity and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Procuring Entity shall pay any balance to the Contractor.

15.5 Procuring Entity's Entitlement to Termination for Convenience

15.5.1 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].

15.5.2 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].

15.6 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 Not withstanding 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.

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

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

16.1.5 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.

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

16.2 Termination by Contractor

16.2.1 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.

16.2.2 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.

16.2.3 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 hasnot received the sums due to him upon expiration of the14 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-Clause14.8 [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.

16.3 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.

16.4 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 oftheir 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.

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

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

17.3 Procuring Entity's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of Procuring Entity's Risks] below, 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.

17.4 Consequences of Procuring Entity's Risks

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

17.4.2 If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the 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.

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

17.5 Intellectual and Industrial Property Rights

17.5.1 In this Sub-Clause, “infringement” 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.

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

17.5.3 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.

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

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

17.6 Limitation of Liability

17.6.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any indirect or consequential loss or damage which may be suffered by the other Party in connection withthe Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Costof Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause17.1 [Indemnities]; Sub-Clause 17.4 (b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5[Intellectual and Industrial Property Rights].

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

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

17.7 Use of Procuring Entity's Accommodation/Facilities

17.7.1 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the 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).

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

18. INSURANCE

18.1 General Requirements for Insurances

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

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

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

18.1.4 If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Procuring Entity shall act for Procuring Entity's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

18.1.5 Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

18.1.6 The relevant insuring Party shall, within the respective periods stated in the **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].

18.1.7 When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

18.1.8 Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuringParty 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.

18.1.9 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 Contractor 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 theseobligations, 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 otherParty 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 Clause18) 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 sub-paragraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

18.2.3 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

18.2.4 Unless otherwise stated in the 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].

18.2.5 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against Injury to Persons and Damage to Property

18.3.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for 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.

18.3.2 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.

18.4 Insurance for Contractor's Personnel

18.4.1 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.

18.4.2 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.

18.4.3 The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19. FORCE MAJEURE

19.1 Definition of Force Majeure

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.

19.2 Notice of Force Majeure

19.2.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

19.2.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

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

19.3 Duty to Minimize Delay

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

19.4 Consequences of Force Majeure

19.4.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

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

b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in 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].

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

19.5 Force Majeure Affecting Subcontractor

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

19.6 Optional Termination, Payment and Release

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 shalltake 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 there 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.

19.7 Release from Performance

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

a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and

b) The sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

20. 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 30days, 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 eventor 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 approvedby 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 theTime 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 toa 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 settlementhas 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 ma tters 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

20.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.

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

20.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

20.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or includedin any certificate.

20.4.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.

20.4.6 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.

20.4.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

20.4.7 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.

20.4.8 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

20.5 Arbitration with National Contractors

20.5.1 if the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

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

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

20.6 Arbitration with Foreign Contractors

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

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

20.7 Alternative Arbitration Proceedings

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

20.8 Failure to Comply with Arbitrator's Decision

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

20.8.2 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 hereinshall prevail over those in the GCC.

Condition	GCC Clause	Data
Procuring Entity's Name and Address	1	Kenya Rural Roads Authority, P.O. Box 48151 – 00100, NAIROBI, KENYA.
Time for Completion	1.1.4	The Time for Completion are the following: A. Construction: Thirty (30) Months B. Maintenance and Rectification during Defects Liability Period: Twelve (12) Months C. Performance Based Routine Maintenance: N/A
Engineer's Name and Address	1	Director (Road Asset Management), Kenya Rural Roads Authority, Barabara Plaza, Airport South Road, P.O. Box 48151 – 00100, NAIROBI, KENYA.
Electronic Transmission	1.3	Not Allowed
Time for the parties entering into a Contract Agreement	1.6	Within 35 days from the date of Letter of Award
Time for access to the site	2.1.1	Possession of Site within 14 days from the date the Contract Agreement is signed Add Paragraph 2 as follows: "The Engineer SHALL issue to the Contractor an Order to Commence Works within 28 Days"
	2.4.1	Delete entire paragraph and insert the following: "The Employer to make necessary arrangements to pay the Contractor in a timely manner"
Engineer's Authority to make Variation	3.1.2(b)(ii)	Variation would include increase in the accepted Contract amount by not exceeding …25…% of the Contract Price.
	3.1.2	Amend the second 3.1.2 to 3.1.3 and 3.1.3 to be 3.1.4
	3.4.1	Delete the entire paragraph and replace with "The Employer may at any time during the Performance of the Contract replace the Engineer"
	4.1.1	Delete "……design to the extent specified in the Contract……"
Performance Security	4.2.2	Delete and replace with: "The Contractor shall provide security in, respect of the value of the BID SUM, for his proper performance of the Contract within 28 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee, as stipulated by the Employer in the Appendix to Bid. The performance security shall be denominated in the types and proportions of currencies in which the Contract Price is payable. The Contractor shall notify the Engineer when providing the Performance Security to the Employer". The security SHALL be 5% of Bid Sum. "If the performance security is a bank guarantee, it shall be issued either

Condition	GCC Clause	Data
		(a) by a bank located in the country of the Employer or a foreign bank through a correspondent bank located in the country of the Employer, or (b) directly by the foreign bank that has been determined in advance to be acceptable to the Employer'' "Without limitation to the provisions of the preceding paragraph, whenever the Engineer determines an addition to the Contract Price as a result of a change in cost, the Contractor, at the Engineer's written request, shall promptly increase the value of the Performance Security by an equal percentage''
	4.2.3	Replace 14 Days with 21 Days
Contractor's Representative's Name	4.3	Delete entire Paragraph 1 to read: "The Contractor SHALL prior to the commencement date submit to the Engineer for consent name and particulars of the person the Contractor proposes to appoint as the 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.''
	4.4.1	Delete and replace with: "The Contractor may subcontract part or all of the works subject to the approval of the Employer.''
	4.21.1	Delete as follows: … "by the Contractor ……" Replace with …… "by the Engineer ……"
Working Hours	6.5	The normal working hours are 8 hours; 8am to 5pm with 1hourlunch break for Monday to Friday and 5hours; 8am to 1pm forSaturdays No works shall be done during Sundays and designated Public Holidays.
	6.7.3	Amend the second 6.7.3 to read 6.7.4
Key Personnel Name	6.9	Key Personnel: A. The key staff listed below must have minimum experience and qualifications as set out in Section III of the Tender Document. B. Key Personnel defined as the Contractor's personnel are:

Condition	GCC Clause	Data
		Site Agent, Senior Foreman, and Site Surveyor.
Disorderly Conduct	6.11	The Engineer shall require the Contractor to remove from the works any person provided by the Contractor who in the opinion of the Engineer misconducts himself or is incompetent or negligent in proper performance of his duties or whose presence on site is considered by the Engineer to be undesirable and such person shall not be again allowed upon the Works without the Consent of the Engineer. Any person removed from the Works shall be replaced as soon as possible by a competent substitute approved by the Engineer and at the Contractor's own expense.
Prohibition of Harmful Child Labor	6.21	Delete entire paragraph and replace with: "The Contractor shall not employ children at any time during the execution of the Contract"
	7.3.1	Replace the "Procuring Entity's Personnel" …… with the "Engineer's Personnel"
Ownership of Plant and Materials	7.7	Delete as follows: "Except as otherwise provided in the Contract, each item of Plant and Materials ……" Replace with "All materials for Works ……"
Commencement of Work	8.1.1	Delete Items (b) and (d)
Taking Over of the Works and Sections	10.1	The minimum length for Taking Over shall be as described in Section 107 of the Special Specifications.
	10.1.1	Delete entire paragraph
	10.1.3	Delete entire paragraph
	10.2.1	Add after …… "Procuring Entity" …… add "…….and the recommendations of the Inspection and Acceptance Committee duly appointed by the Employer ……"
	12.3.2	Delete (a), (b) (i)
Engineer's Duties and Authority	3.1(b)(ii)	Variations resulting in an increase of the Accepted Contract Amount in excess of 25% shall require approval of the Procuring Entity
Adjustments for Changes in Cost	13.8.3	Period "n" applicable to the adjustment multiplier "P_n": _ {Insert the period if different from one (1) month. if period "n" is one (1) month, insert "not applicable"}
Sustainable Procurement	14.1	
Performance Security	4.2	The Performance Security shall be in the form of a "Demand Bank Guarantee" in the amount(s) {5} percent of the Accepted Contract Amount in the same currency(ies) of the Contract Amount.
Normal Working Hours	6.5	The normal working hours are 8 hours; 8am to 5pm with 1hour lunch break for Monday to Friday and 5hours; 8am to 1pm for Saturdays No works shall be done during Sundays and designated Public Holidays.
Delay damages for the Works	8.7 and 14.15(b)	KShs. 100,000.00 per day
Maximum Amount of Delay Damages		5% of Bid Sum
Provisional Sums	13.5. (b)(ii)	NONE
	13.8.4	Add as follows: The basic applicable indices shall be those prevailing indices available 28days prior to last day of bid submission. The weightings for the indices shall be given in TABLE A.

Total Advance Payment	14.2.1	10% of Contract Sum
Repayment Amortization Rate of Advance Payment	14.2.4	Change 30% to 20% and accepted Contract Amount of Bid Sum Delete the Provisions of (b) and replace with "The reimbursement of the lump sum advance payment shall be made by deductions form the interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches or exceeds 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached. The amount to be repaid by way of successive shall be calculated by the means of the formula: $RI = \frac{A\,(x - X)}{80 - 20}$ Where: ~~RI = The~~ amount to be reimbursed A = The amount of the advance which has been granted x = The amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not 80%. X = The amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%. With respect to the first recovery of Advance, it should be noted that where x reaches or exceeds 20%, then X will automatically have taken on the value of 20%. With each reimbursement the guarantee may be reduced accordingly."
	14.2.6	The Employer may, upon request by the Contractor make an interest free Advance Payment to the Contractor in respect of the Works, in a lumpsum of 10% of the Contract Sum as described in the Appendix to Form of Bid. Payment of such Advance Amount will be under a separate certification by the Engineer: 1) Pursuant to Section 148 of the Public Procurement and Disposal Act 2015 (PPDA) 2015 of the Republic of Kenya, the Contractor has confirmed in writing that the Advance Payment shall only be used for purposes of securing plant, materials, or equipment for the purposes of the Contract. This confirmation shall be in form of a schedule of activities, deliverables, and payments to be made, all in relations to the Contract. 2) Provision by the Contractor of the Performance Security (Unconditional Bank Guarantee) in accordance with Clause 10 of the Conditions of Contract, and; 3) Provision by the Contractor of a Bank Guarantee (Unconditional Bank Guarantee) for the full amount of the Advance Payment which shall remain effective until the Advance Payment has been completely repaid by the

Condition	GCC Clause	Data
		Contractor out of current earnings under the Contract and certified accordingly by the Engineer. After payment of the Advance, the Contractor shall be required to provide proof of utilization of the money in compliance with (i) above within 180 days of the said payment. Should it be established that the Advance Payment has been used contrary to paragraph (i) above, or the Contractor has failed to provide evidence of utilization of the money in compliance with (i), the Advance Payment shall be recovered by recalling the Bank Guarantee. A form of Bank Guarantee acceptable to the Employer is included in the Tender Document. The Advance Payment shall be used by the Contractor exclusively for necessary expenditures and execution of works. The Advance Payment shall not be subject to retention money. Partial payment or non-payment of such Advance will not attract interest charges, claim for extension of time or any other claims by the Contractor, nor shall it form any grounds for starting and progressing with the works as per the Contract. The reimbursement of the lumpsum Advance Payment shall be made by deductions from the interim payments and where applicable, from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches or exceeds 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.
Percentage of Retention	14.3	10% of Interim Payment Certificate
Limit of Retention Money	14.3	5% of Bid Sum
	14.3.2	Delete a) and insert as follows: Payment shall be as per the works measured subject to a minimum as per Sub-Clause 14.6.2
	14.3.2	Delete the provisions of (e) and replace as follows: Designated materials as listed below: i) Bitumen and Bituminous products (with exclusion of fuels, oils and lubricants) ii) Reinforcement and structural steel iii) Cement iv) Lime v) Chippings vi) Aggregates vii) Flex beam guard rails The materials on site shall not exceeding 75 percent of the value.
	14.3.2	
	14.4.1	Delete entire paragraph
	14.4.2	Amend quarterly to monthly
	14.6.1	Delete entirely.
Minimum Amount of Interim Payment Certificates	14.6.2	As per the Table B: Schedule of Payments
	14.7.1	Delete (a)
Publishing Source of Commercial Interest Rates	14.8	Delete and replace with: “In the event of the failure of the Employer to make payment within the times stated, the Employer shall make payment to the

Condition	GCC Clause	Data
for Financial Charges in Case of Delayed Payment		Contractor of simple interest at a rate equal to two percentage points above the average bank lending rates obtained from Central Bank of Kenya.''
Maximum Total Liability of the Contractor to the Procuring Entity	17.6	
Periods of Submission of Insurance	18.1	21 Days
a. Evidence of Insurance		21 Days
b. Relevant Policies		21 Days
Maximum Number of Deductible for Insurance of the Procuring Entity's Risks	18.2.4(d)	
Minimum Amount of Third* Party Insurance	18.3	Kenya Shillings. 3,000,000.00
The Place of Arbitration	20.7.2	The place of adjudication/arbitration shall be within the Republic of Kenya as designated by the Adjudicator/Arbitrator

Table A: Approximate Weightings for Price Adjustment

Description of Index	Sources of Indices	% Range of Weighting	Base Indices – 28 days prior to the date of Bid Submission	Bidders Proposed Weighting
Fixed (“A”)	KNBS	50		
Labour	KNBS	5 – 10		
Fuels	KNBS	10 – 15		
Oils and Lubricants	KNBS	1 – 5		
Cement	KNBS	4 – 10		
Reinforcement & Steel Products	KNBS	1 – 3		
Explosives	KNBS	0.1 – 0.5		
Bitumen and Bituminous Products	KNBS	20 – 25		
Total				100%

Table B: Schedule of Payments

Q/No.	*Milestone	Payment Date	Valuation	Recovery of Advance Payment
1.	On attainment of 5% of project length to bitumen standard		Full value of Milestone as measured	
2.	On attainment of 10% of project length to bitumen standard		Full value of Milestone as measured	
3.	On attainment of 15% of project length to bitumen standard		Full value of Milestone as measured	Start recovery as per Sub-Clause 14.2.4
4.	On attainment of 20% of project length to bitumen standard		Full value of Milestone as measured	
5.	On attainment of 25% of project length to bitumen standard		Full value of Milestone as measured	
6.	On attainment of 30% of project length to bitumen standard		Full value of Milestone as measured	
7.	On attainment of 35% of project length to bitumen standard		Full value of Milestone as measured	
8.	On attainment of 40% of project length to bitumen standard		Full value of Milestone as measured	
9.	On attainment of 45% of project length to bitumen standard		Full value of Milestone as measured	
10.	On attainment of 50% of project length to bitumen standard		Full value of Milestone as measured	
11.	On attainment of 55% of project length to bitumen standard		Full value of Milestone as measured	
12.	On attainment of 60% of project length to bitumen standard		Full value of Milestone as measured	
13.	On attainment of 65% of project length to bitumen standard		Full value of Milestone as measured	
14.	On attainment of 70% of project length to bitumen standard		Full value of Milestone as measured	End recovery as per Sub-Clause 14.2.4
15.	On attainment of 75% of project length to bitumen standard		Full value of Milestone as measured	
16.	On attainment of 80% of project length to bitumen standard		Full value of Milestone as measured	
17.	On attainment of 85% of project length to bitumen standard		Full value of Milestone as measured	
18.	On attainment of 90% of project length to bitumen standard		Full value of Milestone as measured	
19.	On attainment of 95% of project length to bitumen standard		Full value of Milestone as measured	
20.	On attainment of 100% of project length to bitumen standard		Full value of Milestone as measured	
21.	Payment of all pending works and additional instructions by the Engineer		Value of measured works	

22.	Final accounts for the project		Value of measured works, claims, interests etc…	In accordance with the General Conditions of Contract and other Contractual provisions

1. A milestone shall be a fully completed section of the road as above having all pavement layers, access culverts, cross pipe culverts and functioning drains and Road Furniture
2. For assigned or formally sub-contracted works, a milestone shall constitute 5% of the total length of the project road assigned or formally sub- contracted, having all pavement layers, access culverts, cross pipe culverts and functioning drains.
3. Consequent to item (2) above, a milestone shall constitute 5% of the total length of the project road remaining with the main Contractor after assignment or formal sub-contracting of portions of the road having all pavement layers, access culverts, cross pipe culverts and functioning drains.
4. Completion of bottleneck section on the project road to pavement standard as instructed and approved by the Engineer shall constitute a milestone.
5. Work executed under Major structures (box culverts and bridges) together with approaches as shall be defined by the Engineer will be valued and paid as a milestone.
6. Maintenance ahead of Works shall be payable with the due milestone
7. Road marking shall form part of the last mile stone

FORM No 1: NOTIFICATION OF INTENTION TO AWARD

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

FORMAT

1. For the attention of Tenderer's Authorized Representative
   - *i)* Name: *[insert Authorized Representative's name]*
   - *ii)* Address: *[insert Authorized Representative's Address]*
   - *iii)* Telephone: *[insert Authorized Representative's telephone/fax numbers]*
   - *iv)* Email Address: *[insert Authorized Representative's email address]*

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

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

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

3. Notification of Intention to Award

   - *i)* Procuring Entity: *[insert the name of the Procuring Entity]*
   - *ii)* Project: *[insert name of project]*
   - *iii)* Contract title: *[insert the name of the contract]*
   - *iv)* Country: *[insert country where ITT is issued]*
   - *v)* ITT No: *[insert ITT reference number from Procurement Plan]*

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

4. Request a debriefing in relation to the evaluation of your tender

   Submit a Procurement-related Complaint in relation to the decision to award the contract.

   a) The successful tenderer

      i) Name of successful Tender_____

      ii) Address of the successful Tender

      iii) Contract price of the successful Tender Kenya Shillings _____ (in words_____)

   b) Other Tenderers

   Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

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

(Note a) State NE if not evaluated

5. How to request a debriefing

a) DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (*local time*).

b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.

c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

i) Attention: [*insert full name of person, if applicable*]

ii) Title/position: [*insert title/position*]

ii) Agency: [*insert name of Procuring Entity*]

iii) Email address: [*insert email address*]

d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint

a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:

i) Attention: [*insert full name of person, if applicable*]

ii) Title/position: [*insert title/position*]

iii) Agency: [*insert name of Procuring Entity*]

iv) Email address: [*insert email address*]

c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website info@ppra.go.ke or complaints@ppra.go.ke.

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

e) There are four essential requirements:

i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.

ii) The complaint can only challenge the decision to award the contract.

iii) You must submit the complaint within the period stated above.

iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

i) DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).

ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.

iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

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

Signature:_____ **Name:**_____

Title/position:_____ **Telephone:**___ **Email:** _____

FORM NO. 2 - REQUEST FOR REVIEW

FORM FOR REVIEW(r.203(1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO…….OF……..….20……...

BETWEEN

……...…….APPLICANT

AND

……RESPONDENT (Procuring Entity)

Request for review of the decision of the…… (Name of the Procuring Entity of ……dated the…day of …….20…….in the matter of Tender No……..…of ……..20….. for .....(Tender description).

REQUEST FOR REVIEW

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

1.

2.

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

1.

2.

SIGNED …….(Applicant) Dated on…….day of ……/…20……

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on……day of ……...20….……

SIGNED

Board Secretary

FORM NO 3: LETTER OF AWARD

[letterhead paper of the Procuring Entity] [date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by …… (*name of Procuring Entity)*.

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature:.....

Name and Title of Signatory:.....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the_____day of_____, 20____, between _____of _____ (hereinafter "the Procuring Entity"), of the one part, and_____of_____(hereinafter "the Contractor"), of the other part:

WHEREAS the Procuring Entity desires that the Works known as_____should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
   a) the Letter of Acceptance
   b) the Letter of Tender
   c) the addenda Nos_____(if any)
   d) the Special Conditions of Contract
   e) the General Conditions of Contract;
   f) the Specifications
   g) the Drawings*;* and
   h) the completed Schedules and any other documents forming part of the contract.

3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by_____(for the Procuring Entity)

Signed and sealed by_____(for the Contractor).

FORM NO. 5 - PERFORMANCE SECURITY

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_____

_____*[Insert date of issue]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____(hereinafter called "the Contractor") has entered into Contract No._____dated_____with (*name of Procuring Entity*)_____(the Procuring Entity as the Beneficiary), for the execution of _____(hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in words*),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

4. This guarantee shall expire, no later than the …. Day of ……, 2...…[2], and any demand for payment under it must be received by us at the office indicated above on or before that date.

5. The Guarantor agrees to an extension of this guarantee, in response to the Applicant's written request for such extension for a period necessary for the completion of the contracted works subject to the concurrence of the Employer. Such request to be presented to the Guarantor not less than fourteen (14) days before the expiry of the guarantee."

[Name of Authorized Official, signature(s) and seals/stamps].

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

[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM No. 6 - PERFORMANCE SECURITY

[Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_

*[Insert date of issue]***.**

PERFORMANCE BONDNo.:_____

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond_____as Principal (hereinafter called "the Contractor") and_____] as Surety (hereinafter called "the Surety"), are held and firmly bound unto_____as Obligee (hereinafter called "the Procuring Entity") in the amount of_____for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____day of_____, 20 , for_____in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
   1) complete the Contract in accordance with its terms and conditions; or
   2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
   3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day_____of_____20_____.

SIGNED ON_____on behalfof By___in the capacity of In the presence of

SIGNED ON_____on behalf of By__in the capacity of In the presence of

FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____*[Insert name and Address of* Procuring Entity*]*
Date: _____*[Insert date of issue]*

ADVANCE PAYMENTGUARANTEE No.: _____*[Insert guarantee reference number]* **Guarantor:**

_____**[***Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____(hereinafter called "the Contractor") has entered into Contract No._____*dated*_____with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____(*in words*) is to be made against an advance payment guarantee.

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in words*_____)[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
   a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
   b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number_____at_____.

5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the _____ day of_____, 2 ,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months][one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.*

[2] *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM NO. 8 - RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____*[Insert name and Address of* Procuring Entity*]*

Date:_____*[Insert date of issue]*

Advance payment guarantee no. *[Insert guarantee reference number]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____*[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Contractor") has entered into Contract No. _____*[insert reference number of the contract]* dated_____with the Beneficiary, for the execution of_____*[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of *[*insert the second half of the Retention Money] is to be made against a Retention Money guarantee.

3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]*_____(*[insert amount in words*_____*])*[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number_____at_____*[insert name and address of Applicant's bank]*.

5. This guarantee shall expire no later than the …..... Day of ….....……, 2.....…[2], and any demand for payment under it must be received by us at the office indicated above on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*

[2] *Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

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

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.:_____[*insert identification no*]

Name of the Tender Title/Description:_____*[insert name of the assignment]* to:

_____*[insert complete name of Procuring Entity]*

In response to the requirement in your notification of award dated__*[insert date of notification of award]* to furnish additional information on beneficial ownership:_____*[select one option as applicable and delete the options that are not applicable]*

I) We here by provide the following beneficial ownership information.

Details of beneficial ownership

	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights a person holds in the company**	**Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer** (Yes / No)	**Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)**
1.	Full Name		Directly----------% of shares Indirectly---------% of shares	Directly…….% of voting rights Indirectly----------% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No---- 2. Is this right held directly or indirectly?: Direct…… Indirect……..	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes -----No---- 2. Is this influence or control exercised directly or indirectly? Direct…….. Indirect……
	National identity card number or Passport number					
	Personal Identification Number (where applicable)					
	Nationality					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
2.	Full Name		Directly-	Directly……		

	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights a person holds in the company**	**Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer** (Yes / No)	**Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)**
	National identity card number or Passport number		---------- % of shares Indirectly---------- % of shares	…….% of voting rights Indirectly---------- % of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No---- 2. Is this right held directly or indirectly?: Direct…… Indirect……	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes -----No---- 2. Is this influence or control exercised directly or indirectly? Direct…….. Indirect……
	Personal Identification Number (where applicable)					
	Nationality(ies)					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
3. **e.t .c**						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

(a) holds at least ten percent of the issued shares in the company either directly or indirectly;

(b) exercises at least ten percent of the voting rights in the company either directly or indirectly;

(c) holds a right, directly or indirectly, to appoint or remove a director of the company; or

(d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer: .....[insert complete name of the Tenderer]*_____

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

Designation of the person signing the Tender: ..... [insert complete title of the person signing the Tender]

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

Date this ..... [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp

BILL OF QUANTITIES

PROPOSED UPGRADING TO BITUMEN STANDARD OF KATITO - AWASI ROAD
SUMMARY OF BILL OF QUANTITIES

BILL ITEM	DESCRIPTION	AMOUNT (KSHS)
1	Preliminaries and General items	
4	Site Clearance and Top Soil Stripping	
5	Earth Works	
7	Excavation and Filling of Structures	
8	Culverts and Drainage Works	
9	Passage to Traffic	
12	Natural Gravel Base and Subbase	
14	Lime/Cement Improved gravel Subbase and Base	
15	Bituminous Surface Treatment and Surface Dressing	
16	Bituminous Mixes	
17	Concrete Works	
20	Road Furniture	
21	Miscellaneous Bridge works	
22	Schedule of Dayworks.	
25	HIV/AIDS, Gender &Social Issues, Local Participation	
26	Land acquisition, axle load control and relocation of services	
(A)	**SUB-TOTAL (1)**	
(B)	Add 5% VARIATION OF PRICE of sub total (1)	
(C)	Add 5% CONTIGENCIES of sub total (1)	
(D)	**SUB-TOTAL(2) = (A+ B + C)**	
(E)	Add …16% VAT of sub-total (2)	
(F)	Add 0.03% Public Procurement Capacity Building Levy (PPCBL) of sub total (2)	
GRAND TOTAL= (D+E+F)		

PROPOSED UPGRADING TO BITUMEN STANDARD OF KATITO - AWASI ROAD

BILL NO. 1. PRELIMINARIES AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
1.01	Provide or rent accomodation for Engineer's senior and junior staff				
	(i)Type I - 1 No.	Month	30	65,000.00	1,950,(
	(i)Type II - 3 No.	Month	90	55,000.00	4,950,(
	(iii) Type III - 3No.	Month	90	40,000.00	3,600,(
	(iv) Type IV - 4 No.	Month	120	30,000.00	3,600,(
	(v) Type V - 8 No.	Month	240	21,000.00	5,040,(
	Total				**19,140**
1.02	E.O item 1.01 for contractor's overhead and profit	%			
1.03	Provide or rent and maintain Engineer's Representative's office as shown on the drawings or as instructed by the Engineer for use during the duration of the Contract, ownership to revert to the Contractor at the end of the Contract	LS	1		
1.04	Provide or rent and maintain Engineer's Site Laboratory for the duration of the Contract, ownership to revert to the Contractor at the end of the Contract	LS	1		
1.05	Provide and maintain Laboratory equipment, reagents and other items as priced in Appendix 'A' to the Bill of Quantities for use by the Engineer's representative for the duration of the contract, ownership to revert to the Employer at the end of the Contract.	LS	1		
1.06A	Provide and maintain furniture , tools and other items for the Engineers Representative office for the duration of the Contract as priced in Appendix `B' , ownership to revert to the Employer at the end of Contract.	LS	1		
1.06B	Provide and maintain survey equipment as priced in Appendix C for the duration of the contract, ownership to revert to the Employer at the end of Contract.	LS	1		
1.07	Provide with drivers, fuel and maintain One (1) new 4WD fully loaded Station Wagon of minimum diesel engine capacity 2800 CC approved by the Engineer for his exclusive use, inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.	Veh Month	0		
1.08	E.O item 1.07 for total aggregated mileage in excess of 5000 km per vehicle month.	Km	50,000		

1.09	Provide with drivers, fuel and maintain TWO (2) new 4WD fully loaded double cabin pick-up of minimum diesel engine capacity 2800 CC approved by the Engineer for his exclusive use, inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.	Veh Month	60		
1.10	E.O item 1.09 for total aggregated mileage in excess of 5000 km per vehicle month.	Km	100,000		
1.11	Ditto item 1.09, but Two (2) new 4WD standard double cabin pick-up of minimum diesel engine capacity 2800 CC approved by the Engineer for his exclusive use, inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.	Veh Month	60		
1.12	E.O item 1.11 for total aggregated mileage in excess of 5000 km per vehicle per month.	Km	100,000		
1.13	Ditto item 1.09, but One (1) new 4WD Single cabin pick-ups with fibre glass body of minimum diesel engine capacity 2500cc approved by the Engineer for his exclusive use, inclusive of the first 5000km per vehicle month. Vehicle to revert to the Contractor at the end of the project.	Veh Month	30		
1.14	E.O item 1.13 for total aggregated mileage in excess of 5000 km per vehicle per month.	Km	50,000		
1.15	Allow a Prime Cost Sum of Kshs. 6,000,000.00 for the RE's miscellaneous account to be spent in whole or part as directed by the RE against receipts.	PC Sum	1	6,000,000.00	6,000,000
1.16	E.O. item 1.15 for Contractor's overheads and profits.	%			
1.17	Allow a Prime Cost Sum of Kshs.15,600,000.00 for attendance upon the Resident Engineer' staff.	PC Sum	1	15,600,000.00	15,600,000
1.18	E.O. item 1.17 for Contractor's overheads and profits.	%			
1.19	Provide, erect and maintain publicity signs as directed by the Engineer.	No	2		
1.20	Allow for Prime Cost Sum of Kshs. 2,000,000.00 for training of Engineers	PC Sum	1	2,000,000.00	2,000,000
1.21	E.O. item 1.20 for Contractor's overheads and profits.	%			

	Bill No. 1 Total Carried Forward to Grand Summary				

BILL NO. 4 : SITE CLEARANCE AND TOP SOIL STRIPPING

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	Note: *No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices*				
4.01	Clear site on road reserve including removal of all growths, bushes,hedges, trees, stumps, grub up roots, and other deleterious materials and back-fill and compact to 100% MDD(AASHTO T99) with approved material as directed by the Engineer.	Ha.	8		
4.02	Strip top soil upto 0.2m in thickness along alignment or material sites including removal of all grass and other vegetation,transport to spoil and spread or stock pile for re-use as directed by the Engineer.	m^3	22,000		
4.03	Provide KShs. *3*,500,000.00 for the removal of structures and obstructions as instructed by the Engineer to be paid on dayworks basis	Prov. Sum	1	3,500,000.00	3,500,(
	Bill No. 4 Total Carried Forward to Grand Summary				

BILL NO. 5 : EARTHWORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	Note: *No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices*				

5.01	Fill in soft material including benching of shoulders and embankments and compaction to 95% MDD (AASHTO T99) in layers not exceeding 150mm	m^3	108,990		
5.02	Extra Over Item 5.01 for compaction of the top 300 subgrade to 100% MDD.	m^3	18,360		
5.03	Ditto item 5.01 but in hard material	m^3	82,620		
5.04	Cut to spoil in soft material	m^3	71,680		
5.05	Ditto item 5.04 but in hard material	m^3	11,600		
5.06	Provide improved subgrade material as instructed by the Engineer and compaction to 100% MDD (AASHTO T99)	m^3	47,124		
5.07	Compaction of top 150mm below formation level in cuts to 100% MDD.(AASHTO T99)	m^3	44,520		
5.08	Compaction of 150mm original ground below fills to 95% MDD.(AASHTO T99)	m^3	23,520		
5.09	Top-soiling prior to planting grass as directed by the Engineer	m^2	77,300		
5.10	Grassing as directed by the Engineer	m^2	77,300		
5.11	Provide Rock Fill to swampy areas as directed by Engineer	m^3	40,035		
5.12	Provide Filter fabric to swampy areas, under, over and around rock fill	m^2	65,940		
5.13	Provide and install geogrids	m^2	10		
	Bill No. 5 Total Carried Forward to Grand Summary				

BILL NO. 7 : EXCAVATION AND FILLING OF STRUCTURES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO

	Note: *No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices*				
7.01	Excavate to spoil in soft materials.	m^3	23,040		
7.02	As item 7.01 but in hard material.	m^3	6,720		
7.03	Provide,place and compact rockfill below and around structures.	m^3	28,800		
7.04	Provide and place 150mm thick stone pitching as directed by the Engineer including cement grouting	m^2	8,600		
7.05	Excavate for gabions in soft material.	m^3	2,160		
7.06	Provide and place gabion boxes and matresses where directed by the Engineer.	m^2	6,710		
7.07	Rockfill to gabions	m^3	1,220		
7.08	Filter fabric behind gabion boxes and structures	m^2	2,300		
7.09	Provide and backfill approved material around new structures, compact 100% MDD (AASHTO T99) in layers not exceeding 150mm.	m^3	24,000		
7.10	Allow for protection of structures pursuant to Section 708 of the specifications	LS	2		
7.11	Allow for river training in soft material	m^3	2,236		
7.12	Allow for river diversion	m^3	1,680		
7.13	Provide coffer dams as directed by the Engineer.	LS	2		
	Bill No. 7 Total Carried Forward to Grand Summary				

BILL NO. 8. CULVERTS AND DRAINAGE WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	Note: *No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices*				

8.01	Excavate for inlet,outfall,mitre and catch water drains in soft material	m^3	2,310		
8.02	As per item 8.01, but for hard material	m^3	825		
8.03	Excavation in soft material for pipe culverts,headwalls, wingwalls, apron,toewalls,and drop inlets and compact as directed by the Engineer	m^3	4,419		
8.04	As per item 8.03, but for hard material	m^3	730		
8.05	Provide,lay and joint 600mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access roads	m	1,825		
8.06	As for item 8.05 but 900mm dia concrete pipes (precast to BS 5911 parts 1 & 3) for cross culverts	m	1,280		
8.07	As for item 8.05 but 1200mm dia concrete pipes (precast to BS 5911 parts 1 & 3)for cross culverts	m	136		
8.08	Provide and place class 15/20 concrete to beds, surround and haunches	m^3	2,389		
8.09	Provide, place and compact class 25(20) concrete for headwalls, wingwalls, aprons, and toewalls to access and cross pipe culverts including all form work and the provision and placing of reinforcement as shown in the drawings	m^3	2,353		
8.10	Provide and place invert block drains with two course side slabs	m	1,200		
8.11	Construct in concrete class 15(20) side drains scour checks as instructed	m^3	300		
8.12	Provide and place A142 wire mesh reinforcement	m^2	320		
8.13	Provide and place precast concrete slabs 1000mm x 600mm x 100mm and place over open lined drains in trade centres and markets (reinforced with A142 wire mesh reinforcement)	No.	1,300		
8.14	Provide subsoil filter drains fabric to isolated wet spots inclusive of artesian cloth, and 14/20mm single size aggregates as directed by the Engineer	m^2	960		
8.15	Remove existing pipe culverts of any diameter either for re-use or to be discarded as directed by the Engineer	m	1,800		
8.16	Provide,lay and joint ducts and sleeves including150mm concrete (C15/20) 300mm diameter heavy duty PVC class B with 150mm surround (precast to BS 5911 Parts 1 & 3) ducts/sleeves	m	100		

	Bill No. 8 Total Carried Forward to Grand Summary	

BILL NO. 9: PASSAGE OF TRAFFIC

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	NOTE: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included in the rates inserted herein				
9.01	Construct and maintain diversions in maximum lengths of 5km sections as directed by the Engineer, including 150mm wearing course gravel all signage, lighting and barriers	Km	14		
9.02	Provide, spread, water and compact gravel of minimum CBR 30%	m3	14,700		
9.03	Grade, water and compact existing road; provide, spread, water and compact gravel as directed by the Engineer for maintenance ahead of works.	Km	15		
9.04	Allow for the passage of traffic through and around the works	LS	1		
	Bill No. 9 Total Carried Forward to Grand Summary				

BILL NO. 12 : NATURAL MATERIAL FOR SUBBASE AND BASE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	<u>Note:</u> No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates	-	-	-	
12.01	Provide gravel sub-base material, spread, compact to at least 100% M.D.D (AASHTO T-180) and shape to level and tolerance.	m^3	24,555		
12.02	Ditto item 12.01 but for base	m^3	24,640		
	Bill No. 12 Total Carried Forward to Grand Summary				

BILL NO. 14 : CEMENT OR LIME TREATED SUBBASE AND BASE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	***Note:** No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates*	-	-	-	
14.01	Provide and spread Lime/ Cement as an improvement agent for subbase and base layers	Tonne	1,473		
14.02	Provide and spread Lime/ Cement as an improvement agent for sub-base and base layers	Tonne	1,552		
14.03	Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	m^3	49,195		
14.04	Protection and curing of cement / lime treated base and sub-base layers	m^2	316,000		
Bill No. 14 Total Carried Forward to Grand Summary					

BILL NO. 15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDERS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
15.01	Prepare surface of carriageway and shoulders, provide, heat and spray MC 30 cutback bitumen prime coat at 0.8-1.2 Litres/m2.	Litres	190,080		
15.02	Prepare surface of carriageway and shoulders, provide, heat and spray 80/100 bitumen seal coat as third seal at a rate of 0.6- 0.8 Litres/m2.	Litres	158,400		
15.03	Provide, spread and roll 6/10mm precoated chippings	m^2	1,980		
15.04	Provide & spray K1-60 as tack coat on carriageway, shoulders and on rumble strips at a rate of 0.5-0.8 l/m^2	Litres	126,720		
	Bill No. 15 Total Carried Forward to Grand Summary				

BILL NO. 16: BITUMINOUS MIXES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO

16.01	Provide, place and compact Asphalt Concrete Type II to a thickness of 35 mm on carriageway, shoulders and bus bays as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total mix.	m^3	5,544		
16.06	Provide, place and compact Asphalt Concrete Type I (0/14) for bumps and rumble strips as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total mix.	m^3	200		
	Bill No. 16 Total Carried Forward to Grand Summary				

BILL NO. 17. CONCRETE WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	CONCRETE WORKS				
	<u>Concrete</u>				
17.01	Provide, place and compact Class 15(20) concrete blinding as instructed by the Engineer	m^3	180		
17.02	Provide, place and compact concrete class 25(20) to aprons, wingwalls, abutments, piers, walls and box culverts as shown in drawings.	m^3	1,100		
17.03	Provide, place and compact concrete class 30(20) to aprons, wingwalls, abutments, piers, walls and bridge deck and beams as shown in drawings.	m^3	380		
	Reinforcement: ***Provide, cut, bend & fix into position steel reinforcement as shown in the drawings or as instructed by the Engineer***	-			
17.04	High yield reinforcement steel bars to specifications equal to or less than 16mm diameter bar size	Tonne	68		
17.05	High yield bond strength reinforcement steel to specifications greater than 16mm diameter bar size	Tonne	220		
	Formwork : ***Provide,erect and afterwards dismantle and remove all the formwork as instructed by the Engineer***	-			
17.06	Provide & fix in place formwork to achieve Class U F1 finish	m^2	1,580		
17.07	Provide & fix in place formwork to achieve Class U F2 finish	m^2	521		
17.08	Provide & fix in place formwork to achieve Class U F3 finish	m^2	2,680		

	Bill No. 17 Total Carried Forward to Grand Summary				
BILL NO. 20: ROAD FURNITURE					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMO**
20.01	Provide Road Reserve Boundary posts	No.	190		
20.02	Excavate for, provide & place 250 x 125mm precast concrete raised or ramped kerbs haunched in 100mm thick class 15/20 concrete base bedding and mortar joined in support to carriageway, busbays and junctions as directed by the Engineer.				
	a) Straight kerbs	m	1,300		
	b) Kerbs radius 12m - 6m	m	800		
	c) Ditto but radius 5m - 1m	m	800		
20.03	As 20.02 but for flush kerbs 100 x 125mm	m	2,000		
20.04	Provide and erect permanent road signs where instructed by the Resident Engineer and in accordance with Special Specifications Clause 2004 as follows:				
	a) warning signs	No.	30		
	b) Priority prohibitory and mandatory signs	No.	20		
	c) Standard informatory signs	No.	20		
	d) Non standard informatory signs area				
	i) Less than $1.0m^2$	No.	12		
	ii) More than $1.0m^2$ but less than $5m^2$	No.	8		
20.05	Provide, deliver, paint and mark the road as specified or as directed by the Engineer, with white reflectorized thermoplastic paint from an approved supplier.	m^2	6,670		
20.06	As item 20.05 but for yellow reflectorized thermoplastic paint	m^2	2,185		
20.07	Provide and erect concrete posts for guardrails complete with spacers (size and interval) as per specifications or as directed by the Engineer	No.	1,250		
20.08	Provide and erect flex-beam guardrails complete with connections as shown on the drawings or as directed by the Engineer	m	2,500		
20.09	Provide Edge marker posts	No.	100		
20.10	Provide kilometre marker posts as directed by the Engineer	No.	76		
20.11	Installation of fencing	m	0		
20.12	Installation of gates	No.	0		

20.13	Construction of speed bumps with Concrete as directed by engineer	m^3	5		
20.14	Provide and install cat-eyes as directed by the Engineer	No.	5		
20.15	Provide, plant, and nurture tree seedlings for a period not less than half the construction period of the project or as directed by the Engineer.	No.	1,000		
20.16	Provide and install new guard rails as directed by the Engineer.	m	2		
20.17	Provide and install new guard rail posts including anchor bolts and nuts as directed by the Engineer.	m	2		
20.18	Provide and install new hand rails as directed by the Engineer.	m	2		

BILL NO. 21: MISCELLANEOUS BRIDGE WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
21.01	Provide 100 mm diameter drain pipes and insert heavy duty PVC 100mm diameter as instructed by the Engineer	No	600		
21.02	Provide 100 mm diameter weepholes and insert heavy duty PVC 100mm diameter on abutments or as instructed by the Engineer	No	600		
21.03	Provide and fix hand rails 75 mm diameter on crash barriers, with hold down brackets at not more than 2.5 meter intervals	m	240		
21.04	Provide and apply bitumen emulsion or cutback bitumen or bitumen/rubber latex emulsion to all structural concrete in contact with fill material or cut soil.	m^2	980		
21.05	Provide and place into position handrails to kerbs of bridge deck & ramps as shown on the drawing and as directed by the Engineer.	m	240		
21.06	Provide and place a 0.5-1.0m wide granular material of size 14/20 mm to structural concrete in contact with fill material.	m^3	1,240		
21.07	Provide and place as directed by the Engineer PVC pipes of diametre 75 mm and length 300 mm to form storm drain pipes of the bridge deck	No.	120		
21.08	Provide and place into position Elastomeric laminated rubber bearings of size 406mmx356mmx54mm	No.	20		
21.09	Movement joints at abutments and piers including dowels	m	30		

21.10	25mm thick 'flex cell' or similar approved low compression joint filler at expansion joint	m	10		
21.11	Paraseal or similar approved cold poured polysulphide sealant	m	10		
21.12	Carry out maintenance works on *(insert number)* No. Bailey Bridges to specifications or as directed by the Engineer	Lump Sum	N/A		
Bill No. 21 Total Carried Forward to Grand Summary					

BILL NO. 22: SCHEDULE OF DAYWORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMO
	PLANT				
	The rates inserted herein are to include all operational and Maintenace costs, fuel, oil, grease, drivers/operators wages, supervision, overheads and profit. Only time actually employed upon the work will be paid for and the rates should include for idle time, travelling time and overtime, In accordance with clause 2202 (a) of the specifications. Note: All items of plant must be priced.				
22.01	Crawler dozers with hydraulic attachments to include ripper				
	a) Up to 135 kw rated flywheel power	hrs	10		
	b) Over 135 kw rated flywheel power	hrs	4		
22.02	Motor Grader				
	a) Up to 110kw rated flywheel power	hrs	5		
	b) Over 110kw rated flywheel power	hrs	5		
22.03	Vibratory Roller				
	a) 6.5 - 8.81 tonne un-ballasted weight	hr	5		
	b) Over 8.91 tonne un-ballasted weight	hr	5		
22.04	Hand propelled vibrating roller 650 - 1300kg	hrs	5		
22.05	Cat 950G wheel loader or equivalent	hrs	5		
22.06	10 Tonne tipper lorry	hrs	5		
22.07	Small dumpers, 750-1000kg rated payload	hrs	5		
22.08	Dual purpose hydraulic excavator with backhoe/loader and a rated bucket capacity of upto 1m3.	hrs	5		

22.09	Articulated wheel loader with 1.5-2.0m^3 SAE rated bucket capacity	hrs	5		
22.10	50mm delivery water pump and motor	hrs	5		
22.11	Self propelled water tanker 4,500ls min. capacity with pick-up pump	hrs	5		
22.12	Concrete Mixer of 100 - 150litres	hrs	5		
22.13	Concrete poker vibrator	hrs	5		
	LABOUR				
	The rates inserted herein are to include all costs of labour such as insurance, accomodation, travelling time, over-time, use and maintenance of small tools of trade.Only the actual time engaged upon the work will be paid for.supervision, overheads and Profit.				
22.14	Unskilled Labour	hrs	10		
22.15	Artisans	hrs	10		
22.16	Office attendants and chainmen	hrs	10		
22.17	Watchmen (all round surveillance)	hrs	10		
	MATERIALS				
	All materials are to comply with the Specification. The rates				
	inserted herein are to include for delivery to the site, storage,				
	handling, overheads and profit				
22.18	Ordinary Portland Cement 42.5 N	Ton	1		
22.19	Hydrated Lime	Ton	1		
22.20	Mild Steel(any diametre)	Ton	2		
22.21	High Yield Steel (any diameter)	Ton	1		
22.22	Fine Aggregate for Concrete	m^3	1		
22.23	Coarse Aggregate for Concrete	m^3	5		
22.24	Wrot Shuttering Timber	m^2	5		
22.25	Rough shuttering timber.	m^2	5		
22.26	Bitumen Emulsion KI-60.	Litre	5		
22.27	Straight run bitumen Grade 80/100.	Litre	5		
22.28	Kerosene	Litre	5		
22.29	14/20 mm nominal size surface precoated chippings	m^3	5		
22.30	6/10mm nominal size surface precoated chippings	m^3	5		
22.31	AC Type I Ex-plant	m^3	5		
22.32	AC Type II Ex-plant	m^3	5		
22.33	Dense Bitumen Macadam	m^3	5		

	Bill No. 22 Total Carried Forward to Grand Summary				
BILL NO. 25: ENVIRONMENTAL, HIV/AIDS, AND COVID-19 MITIGATION MEASURES					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMO**
25.01	Allow for a prime cost sum of KShs 5,000,000 (five Million) for ESIA study, report, and environmental monitoring.	PC sum	1		
25.02	E.O for Item 25.01 for Contractor's Oveheads and Profit	Item			
25.03	Allow for engagement of a HIV/AIDS and COVID-19 specialist sub contractor to deal with prevention and awareness activities as per programme to be approved by the Engineer	Months	30		
25.04	Provide male and female condoms to workers and staff for the duration of the contract	No.	24,000		
25.05	Allow for preparation and submmision of monthly reports on HIV/AIDS and COVID-19 awareness and prevention activities. Report to be tabled at site meetings.	Months	30		
25.06	Provide, Install and maintain HIV/AIDS and COVID-19 awareness bill boards with approved message and graphics with maximum area $4m^2$ fabricated as per specifications of permanent informatory sign boards	No.	4		
25.07	Allow for video shows on HIV/AIDS and COVID-19 related awareness and prevention matters every 3 months	Quartely	8		
25.08	Provide HIV/AIDS and COVID-19 awareness material as follows:				
	a) T-Shirt printed with approved message and graphics	No.	100		
	b) Ditto (a) above but caps	No.	100		
	c) A1 size weather proved posters	No.	100		
	d) A3 size weather proved posters	No.	100		
	e) 200x150mm stickers with HIV/AIDS and COVID-19 awareness/prevention slogan	No.	100		
	f) Key rings with HIV/AIDS and COVID-19 awareness/prevention slogan	No.	100		
	g) Ball point pens with HIV/AIDS and COVID-19 awareness prevention slogan.	No.	100		
25.09	Provide and maintain handwashing points at strategic locations as directed by the Engineer throughout the construction period.	No.	20		
25.10	Provide face masks as specified or as shall be directed by the Engineer.	No.	10,000		

Bill No. 25 Total Carried Forward to Grand Summary					

BILL No. 26: LAND ACQUISITION, AXLE LOAD CONTROL, AND RELOCATION OF SERVICES

Item	Description	Unit	Quantity	Rate	Amou
26.01	Allow a Prime Cost Sum of KShs. 3,000,000.00 for relocation of services as instructed or directed by the Engineer..	PC Sum	1		
26.02	E.O. item 26.03 for Contractor's overheads and profits.	%			
26.03	Allow a Prime Cost Sum of KShs.4,500,000 for geotechnical investigation as instructed or directed by the Engineer..	PC Sum	1		
26.04	E.O. item 26.03 for Contractor's overheads and profits.	%			
	Bill No. 26 Total Carried Forward to Grand Summary				

APPENDIX A

PROVIDE AND MAINTAIN FURNITURE AND EQUIPMENT FOR THE ENGINEER'S LABORATORY

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOU (KSHS)
	1. FURNITURE				
A104/1.01	Desk 2.2x0.9 m with chair and lockup drawers	No	2		
A104/1.02	Desk chair (standard)	No	15		
A104/1.03	Stationery cupboard, 1.2 m^3, lockable	No	2		
A104/1.04	Steel filing cabinet, 4 drawers, lockable	No	2		
A104/1.05	Steel filing cabinet, 2 drawers, lockable	No	2		
A104/1.06	Bookshelf, 3 shelves 1.2 m long (to hold box files)	No	2		
A104/1.07	Table - 6 m^2	No	2		
A104/1.08	Two Plate electric heater	No	1		
A104/1.09	Fire extinguisher, 10 litre capacity, CO2 type	No	4		
A104/1.10	Complete first aid kit	No	2		
	EQUIPMENT				
	(The following equipment shall be purpose made for use in the Engineer's laboratories and shall comply with the relevant British (BS) or American (AASHTO) Standard)				
	2. General Equipment				
A104/2.02	2.49kg. Compaction hammer, drop regulated to 304.8mm	No	2		
A104/2.03	4.535kg compaction hammer drop regulated to 457.2mm	No	2		
A104/2.04	Electric vibrating Kango Hammer fitted with steel tamper(BS 1377) with support frame	No	1		
A104/2.05	Straight edge 300 mm long with handles	No	4		
A104/2.06	Steel Tamper (BS1377) compatible with Kango hammer	No	3		
A104/2.07	Compaction mould 152.4 mm. dia x 116.43 mm complete with base plate and extension collar, 101.6 mm	No	2		
A104/2.08	Galvanized metal tray 1m x 0.5m x 75 mm deep	No	4		
A104/2.09	75mm brush	No	2		
A104/2.10	Semi-automatic balance, 25kg Capacity accurate to 1g, including weights	No	1		
A104/2.11	20mm BS Sieve, 300mm diameter	No	1		
A104/2.12	Stop Clock	No	2		
A104/2.13	Thermostatically controlled electric oven 105-1100C, capacity 0.225 m^3	No	2		
A104/2.14	As above but gas heated	No	1		
A104/2.15	Moisture content tins, 75 mm dia, Cadmium or aluminium plated	No	60		
A104/2.16	Cone penetrometer with gauge and automatically controlled test cup	No	2		

	3. Density (Sand replacement method BS 1377)				
A104/3.01	Metal containers 450mm diameter	No	2		
A104/3.02	Stainless steel tray 305mm diameter	No	2		
A104/3.03	Metal tray with 150 mm diameter hole in the centre, 300mmx300 mm square or equivalent area, 40mm deep	No	2		
A104/3.04	Metal tray with 200mm diameter hole in the centre, 500mm x 500 mm square , 50 mm deep	No	2		
A104/3.05	Steel pegs for fixing tray in position	No	15		
A104/3.06	Sand pouring cylinder, 150 mm diameter	No	2		
A104/3.07	Sand pouring cylinder, 215 mm diameter	No	2		
A104/3.08	Cold steel chisel 20mm x 300mmm	No	4		
A104/3.09	Cold steel chisel 10mm x 250mmm	No	4		
A104/3.10	1.5kg, 3.5kg hammers and 1kg rubber mallet	Set	1		
A104/3.11	Scoop for removing excavated material from hole, 250 mm long handle	No	6		
A104/3.12	100mm brush, soft	No	3		
A104/3.13	50mm brush, soft	No	3		
A104/3.14	Primus gas stove	No	1		
A104/3.15	Calibrating can 150 mm diameter x 150 mm deep	No	3		
A104/3.16	Ditto but 200 mm diameter x 250 mm deep	No	3		
	5. CBR (AASHTO T193)				
A104/5.01	CBR mould, 152.4 mm dia x 178 mm high, complete with perforated base plate and extension collar 50.8 mm high that can be fitted to either side of mould	No	50		
A104/5.02	Perforated swell plate 150 mm dia with an adjustable centre post of rust proof metal provided with a lock-nut	No	40		
A104/5.03	2.25 kg split surcharge weight	No	2		
A104/5.04	Set of annular surcharge weights	No	1		
A104/5.05	Solid base plate for CBR mould	No	2		
A104/5.06	Static compaction displacer discs 1 Nox 61.4 mm, 1 No x 50.8 mm and 2 Nox 38.8 mm thick with handles	set	1		
A104/5.07	Disk lifting handle	No	2		
A104/5.08	Central extruder, complete with 20kN hydraulic jack and accessories	No	1		
A104/5.09	Automatic CBR Proctor Compaction press, 50 tonnes capacity with an adjustable distance between platens of 530mm-250mm, rammer weights and automatic count selector	No	1		
A104/5.10	Set of guards for above press.	No	1		
A104/5.11	50 kN CBR Load frame complete with stabilising bar (electric and hand operated) including proving rings for 10KN, 28KN and 50KN, piston and bracket	No	1		
A104/5.12	Penetration gauge range 0 - 25mm	No	2		
A104/5.13	CBR piston including bracket	No	2		
A104/5.14	Swell measurement tripod complete with guage calibrated in 0.01 mm divisions	No	2		
A104/5.15	Soaking tank for CBR mould sufficient for 50 moulds	No	1		
	6. Relative Density of Aggregates (BS 812)				
A104/6.01	Wire mesh basket with apertures not greater than 6.5 mm large enough to contain 2.5 kg of aggregate	No	2		
A104/6.02	A stout watertight container in which the basket can be freely suspended	No	2		
A104/6.03	Soft absorbent cloth (tea towel)	No	10		

A104/6.04	Shallow tray of area not less than 0.065 m²	No	2		
A104/6.05	An airtight container of similar capacity to the basket	No	2		
A104/6.06	Pycnometer of 1 litre capacity	No	4		
A104/6.07	Semi automatic 5 kg balance accurate to 0.1g to be of size and type to permit the basket containing the sample to be suspended in water(to be supplied with weights)	No	1		
A104/6.08	Hot air drier (electric)	No	2		
	7. Flakiness (BS 812)				
A104/7.01	Thickness gauge (various sizes)	No	2		
	8. Sieve Analysis (BS 1377)				
A104/8.01	BS Sieve 300mm diameter in sizes 75, 63, 50, 37.5, 28, 20, 14, 10, 6.3, 5 and 4 mm, plus lid and receiver	Set	2		
A104/8.02	BS Sieve 200mm diameter in sizes 2, 1, 0.6, 0.5, 0.425, 0.300,0.150 and 0.075 mm, plus lid and receiver	Set	2		
A104/8.03	Electric sieve shaker	No	1		
A104/8.04	BS sieve 200mm diameter 0.425 and 0.075 mm	set	1		
A104/8.05	1 m x 1 m x 75mm deep galvanized metal tray	No	10		
A104/8.06	Riffle box with 50mm slots (BS 1377)	No	1		
	9. Miscellaneous Equipment				
A104/9.01	Wheel barrow	No	3		
A104/9.02	Dustpan and brush	No	3		
A104/9.03	Shovel	No	4		
A104/9.04	Pick axe with handle	No	4		
A104/9.05	Metal scoop, large (150mm wide)	No	3		
A104/9.06	Metal scoop, medium (100mm wide)	No	4		
A104/9.07	Garden trowel	No	2		
A104/9.08	Steel tray 0.3m x 0.3m x 0.01m deep	No	15		
A104/9.09	Palette knife 200mm long blade	No	3		
A104/9.10	Palette knife 100mm long blade	No	4		
A104/9.11	BS sieve 450mm diameter, 37.5mm	No	1		
A104/9.12	BS sieve 450mm diameter, 20mm	No	1		
A104/9.13	BS sieve 450mm diameter, 5mm	No	1		
A104/9.14	BS sieve 450mm diameter, 0.425mm	No	1		
A104/9.15	BS sieve 450mm diameter, 0.3mm	No	1		
A104/9.16	BS sieve 450mm diameter, 0.075mm	No	1		
A104/9.17	Set of lid and receiver for metal scoop and steel trays	No	2		
A104/9.18	BS Sieve brush	No	2		
A104/9.19	Measuring cylinder set, 25 ml, 100 ml, 500 ml, 1000 ml, 2000 ml	set	2		
A104/9.20	Glass jar capacity 5 litres with lid	No	10		
A104/9.21	200mm x 200mm x 20mm cadmium plated or aluminium tin	No	20		
A104/9.22	Electronic balance capacity 1000 g, accurate to 0.01gm.	No	1		
A104/9.23	Balance 2000 g capacity accuracy to 0.1g (manual), including weights	No	1		
A104/9.24	Balance 50kg capacity accurate to 10gm including weights	No	1		
A104/9.25	Still for producing distilled water	No	1		
A104/9.26	Polythene or glass 20 litres storage vessel with tap at bottom	No	2		
A104/9.27	Stiff broom	No	2		
A104/9.28	Vernier calipers, 150mm	No	2		
A104/9.29	Vernier calipers, 250mm	No	2		
A104/9.30	Pestle and mortar	No	2		
A104/9.31	Linear shrinkage mould (BS 1377)	No	6		

A104/9.32	Liquid Limit Device	No	2		
A104/9.33	Average least dimension gauge	No	2		
A104/9.34	Lockable tool box containing: 1 pr"Molegrips", 2 x 150mm screwdriver, 2 x 200 mm screwdriver, 2 x 300 mm screwdriver,(1 standard and 1 Phillips head of each) adjustable spanners 200 mm and 300 mm, 1 pair round nosed pliers, 1 pair general purpose pliers,	No	1		
A104/9.35	Plastic or metal bucket including lid,10 litres capacity	No	6		
A104/9.36	Polythene wash bottle (500 ml)	No	5		
A104/9.37	A4 size clipboard	No	4		
A104/9.38	Thermometer, range -10°C to150°C, glass (BS 593)	No	2		
A104/9.39	Laboratory thermometer, range + 0°C to + 250°C (BS 593)	No	2		
A104/9.40	Maximum and minimum thermometer (BS692)	No	2		
A104/9.41	Rain gauge	No	1		
A104/9.42	Portable dial thermometer + 50°C to +250°C accurate to ± 3%	No	1		
A104/9.43	Ditto with 0.75m long stem	No	1		
A104/9.44	Pocket thermometer + 50°C to +250°C accurate to ± 3% with 0.1 m stem	No	2		
A104/9.45	5 litre capacity steel storage containers with leak and dust proof lids for storage of bitumen samples	No	50		
A104/9.46	Hotplate 200mm diameter with Simmerstat heat control unit.	No	2		
A104/9.47	450mm diameter x 150mm deep metal mason's basin	No	6		
	11. Concrete: Slump and Cube Manufacture (BS 1881)				
A104/11.01	Slump cone, tamping rod and base	set	2		
A104/11.02	Concrete cube mould, 150mm cube	No	30		
A104/11.03	Soaking tank for cubes (capacity 50 No.)	No	1		
A104/11.04	Cube tamping bars	No	10		
	12. Concrete: Cube Compression Testing				
A104/12.01	Concrete compression machine to BS1610 Grade A with 300 mm gauge, rectangular platens, capacity 1560 kN with load spacer	No	1		
A104/12.02	Safety guard for above				
A104/12.03	50mm distance piece				
A104/12.04	70mm distance piece				
A104/12.05	Electro-mechanical load pacer, 100 mm or equivalent distance piece				
	13. Aggregate and Chippings				
A104/13.01	Sand equivalent to AASHTO T176 including graduated plastic cylinder, rubber stopper, irrigation tube weighted foot assembly, siphon assembly, 85ml tin box (57mm dia.), 100 mm dia wide mouth funnel, stop clock,mechanical shaker and 10 litre jar	Set	1		
A104/13.02	Beaker 250ml	No	2		
A104/13.03	Aggregate Crushing Value Apparatus, 150 mm nominal diameter , including plunger and base plate	No	2		
A104/13.04	Tamping rod and metal measure for above	Set	4		
A104/13.05	Los Angeles Abrasion to ASTM standards	No	1		
A104/13.06	Set of 12 abrasive charges	No	2		
A104/13.07	Thermometer, 0°C to +50°C	No	2		
A104/13.08	Thermometer, 0°C to +250°C	No	2		

A104/13.09	Reagent grade Silica gel, 500g container	No	50		
	14. Bitumen Spray Test (BS 1707)				
A104/14.1	Transverse distribution of spray test bitumen distributor (depot tray test to BS 1707) or equivalent.	Set	1		
A104/14.02	Steel tray 20 mm deep x0.1m2 (for measuring bitumen spray rates) with purpose made detachable handle 1.5m long.	No.	4		
	16. Bitumen Extraction Test				
	A) Extractor Bottle Method BS 598 Part 2				
A104/16.01	Electronic top pan balance 4kg capacity, sensitive to 0.1gm	No	1		
A104/16.02	Flat bottomed scoop	No	3		
A104/16.03	Steel garden trowel	No	2		
A104/16.04	Large steel spoon	No	2		
A104/16.05	Heat resistant gloves	pair	10		
A104/16.06	Foot pump for pressurising air water assemblies up to a maximum of 700KN/m2 and fitted with flexible hose approximately 1.2m long and connector	No	2		
A104/16.07	Steel bottle 600ml capacity with 49mm rubber stopper	No	2		
A104/16.08	Steel bottle 2500ml capacity with 71mm rubber stopper	No	2		
A104/16.09	Steel bottle 7000ml capacity with 71mm rubber stopper	No	2		
A104/16.10	Flask funnel for fitting to the 700ml steel bottle with rim of funnel retaining sieve 200mm nominal diameter	No	2		
A104/16.11	Bottle roller compact bench mounted unit designed to rotate 2 bottles simultaneously about longitudinal axis	No	1		
A104/16.12	Pressure filter complete with cutting tool for making hole in the filter paper	No	1		
A104/16.13	Filter funnel to take 200mm nominal diameter sieves	No	2		
A104/16.14	Centrifuge complying with BS 598	No	1		
A104/16.15	Binder recovery	No	1		
A104/16.16	Volumetric flask 250ml, 500ml, 1000ml and 2000ml capacity	set	2		
A104/16.17	Recovery still for Dichloromethane	No	1		
	B) Hot Extractor Method BS 598 Part 2				
A104/16.18	Hot extractor complete with wire gauze container gasket, cork lid and support assembly	No	2		
A104/16.19	Dean and Stark receiver with condenser to suite Trichloroethylene	No	2		
A104/16.20	Gyratory compactor ELE Servo Pac or equivalent with 1 x 100mm and 1 x 150mm moulds	No	2		
A104/16.21	PRD Vibrating hammer compactor complete with 6 moulds, 7 base plates from ELE	set	1		
A104/16.22	Two (2) sets of Tamping foot 102mm diameter and 146mm diameter and shanks to fit the supplied vibratory hammer	set	2		
	17. Consumables				
A104/17.01	Paraffin wax	Kg	50		
A104/17.02	Gunny sack	No	500		
A104/17.03	Plastic bag 900x450x1000 gauge	No	500		
A104/17.04	Plastic bag 450x300x1000 gauge	No	500		
A104/17.05	Filter paper 150mm diameter Whatman No. 5 (Boxes of 100)	No	20		

A104/17.06	Filter paper 400mm diameter Whatman No. 5 (Boxes of 100)	No	20		
A104/17.07	Filter paper 100mm diameter Whatman No. 5 (Boxes of 100)	No	20		
A104/17.08	Filter paper 400mm diameter Whatman No. 54 (Boxes of 100)	No	10		
A104/17.09	Filter paper 270mm diameter with 33 diameter hole at centre Whatman No. 5 (Boxes of 100)	No	15		
A104/17.10	Trichloroethylene (205 Litre Drum)	No	5		
A104/17.11	Dichloromethane	kg	200		
A104/17.12	Cotton waste	kg	50		
A104/17.13	13kg Gas cylinders filled with gas and with compatible burners	No	5		
A104/17.14	Sodium sulphate	kg	45		
A104/17.15	Sand for density test	kg	250		
C/Forward to item 1.05					

	APPENDIX B				
	APPENDIX TO BILL ITEM 1.06A: PROVIDE, FURNISH AND MAINTAIN THE R.E.'S OFFICE				
	DESCRIPTION	**UNIT**	**QUANTITY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
	ENGINEER'S MAIN OFFICE AND FURNITURE				
1	Executive desk 2.2x0.9 m with six lockup drawers	No	2		
2	Desk 2.2x0.9 m with chair and three lockup drawers	No	4		
3	Office tables 2.2x0.9m	No	3		
4	Executive Swivel orthopeadic chair adjustable height	No	2		
5	Standard office chairs	No	6		
6	Typist's desk	No	1		
7	Typist's chair	No	1		
8	Lockable steel stationery cupboard, 1.2 m^3, lockable	No	2		
9	Medium size steel filing cabinet, 4 drawers lockable	No	2		
10	Medium size steel filing cabinet, 2 lockable drawers	No	2		
11	Bookshelf, 1.5 m wide 3 shelves (for box files) sliding glass door	No	2		
12	Conference table with 15 chairs	No	1		
13	Waste paper basket	No.	5		
14	Curtains for office and laboratory for all windows and doors	Set	2		
15	Ordinary 2 hole paper punch	No	4		
16	Heavy duty 2 hole paper punch	No	2		
17	Computer meeting the following specifications or equivalent: Personal computer with 17" screen full multimedia, 500GB hard disk, 4GB RAM, Core i7 processor, complete with all accessories preloaded with latest versions of windows OS, MS Office, Professional and MS Project	No	3		
18	Autocad Civil 3D 2016 and Licences for above computers	No	1		
19	Laptop PC with Intel Core i7-45IOU Processor 15.4" screen, CPU @ 2.6GHz 8GB RAM 1TB 8xDVD+/-RW approved with Microsoft Windows professional	No	3		
20	Latest HP (A4) Laser Printer with accessories	No	4		
21	Latest HP (A3) Laser coloured Printer with accessories	No	1		
22	UPS 600 VA	No	3		
23	wall clocks, battery powered min size 350mm x 350mm	No	0		
24	First Aid Kit	No	4		
25	Fire Extinguisher	No	4		
26	Filing Tray - set of 3no.	set	10		
27	Refrigerator minimum capacity 0.2 m^3	No	1		
28	Drinking water dispenser, hot/cold	No	3		
29	Table - 0.8 m^2 surface area	No	1		
30	Cupboard, 0.15 m^3, lockable	No	1		
31	13Kg Gas cylinder with three gas burners	No	2		
32	A3 Photocopier (approved make), with feeder sorting trays, scanner and print capability	No	1		
33	Reams of A4 phocopying paper	No	100		
34	Reams of A3 phocopying paper	No	20		
35	Electronic scientific calculator, Casio fx 991ES Plus or equivalent approved	No	6		
36	Stapling machine Ofrex size 50 or similar with 5000 staples	No	6		
37	Heavy duty punch and spiral binder, IBICO AG or similar approved	No	2		
38	Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7"	No	2		

	APPENDIX B				
	APPENDIX TO BILL ITEM 1.06A: PROVIDE, FURNISH AND MAINTAIN THE R.E.'S OFFICE				
	DESCRIPTION	**UNIT**	**QUANTITY**	**RATE**	**AMOUNT**
				(KSHS)	**(KSHS)**
	LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene selection modes, all inclusive.				
39	Provision of mobile phones for supervision team with the latest android version to the approval of the Engineer.	item.	6		
	Total carried to Bill Item 1.06A				

APPENDIX C					
APPENDIX TO BILL ITEM 1.06B ENGINEERS'S SURVEY EQUIPMENT					
ITEM		**UNIT**	**QTY**	**RATE**	**AMOUNT (KSHS)**
1.01	Digital Total Station reading to 1"accuracy (*one second*) with the following facilities	No.	0		
	· Inbuilt data logger				
	· Uploading/downloading software				
	· Data transfer cable				
	· Battery (*2No)*				
	· Battery charger				
	· Tool kit				
	· Two face keyboard				
	· User manual				
	It must have the following inbuilt survey programs as a minimum				
	· Traverse				
	· Cogo				
1.02	The following mandatory total station accessories must be included per Total station instrument				
a)	1No. Heavy duty telescopic tripod(*preferably wooden)*	No.	0		
b)	Telescopic plumbing prism pole complete with a prism and prism holder with target and plumbing bubble *(length not less than 2.15m*)	No.	0		
c)	Triple prism holder set, in a casing, comprising triple prisms, prisms holder with target, tribrach and a tribrach adaptor	No.	0		
d)	Survey umbrella	No.	1		
e)	1No.Telescopic Tripod	No.	0		
1.03	Engineer's Automatic Level Wild NAK 2 or similar with a tripod and the following specifications:-	No.	2		
	· Accuracy of 0.7 mm per 1 km double run				
	· Standard magnification of: 32x				
	· Shortest focusing distance of 1.6m				
	· Compensator setting accuracy of 0.3"				
1.04	Hand held GPS with accuracy of 1 Metre	No.	1		
1.05	Set of two way radio communication with a range of 1 kilometer	set.	1		
1.06	5 M Leveling staff with leveling bubble	No.	4		
1.07	3 M Ranging Rods	No.	10		
1.09	50m. Linen Measuring Tape	No.	5		
1.10	1 M stainless steel straight edge	No.	1		
1.11	3 m tape measure	No.	10		
1.12	Sledge hammer 2kg weight	No.	2		
1.13	Mattock	No.	2		
1.14	Pangas (16'')	No.	10		
1.15	Marker Pens	No.	20		
1.16	Levelling Survey books	No.	50		
1.17	Reflector Jackets	No.	30		
1.18	Provision of Geodetic GNSS receivers comprising of one base and two rovers as per the specfications in Appendix D	No.	1		
Total carried to Bill Item 1.06B					

APPENDIX D			
S/No.	**Item Description**	**GEODETIC GLOBAL NAVIGATION SATELLITE SYSTEM SPECIFICATIONS (GNSS)**	**REMARKS**

APPENDIX D			
S/No.	**Item Description**	**GEODETIC GLOBAL NAVIGATION SATELLITE SYSTEM SPECIFICATIONS (GNSS)**	**REMARKS**
1	Geodetic GNSS Receivers	**General Characteristics** Geodetic Set enabled for both Static and RTK functions with respective supporting software and accessories	
		Specific Specifications **1. Channels:** At least 120 enabled for simultaneous signal tracking	
		2. Reception	
		Must be enabled for Multi - Constellation / Frequency i.e current systems e.g. GPS (L1, L2, L2C, L5)	
		GLONASS (L1C/A, L1P, L2C/A); SBAS (EGNOS, WAAS, MSAS, GAGAN, QZSS)	
		Galileo ready: E1, E5A, E5B	
		BeiDou ready (Compass) : B1, B2	
		Must have some multipath mitigation technology embedded	
		Note: Should be configured to recieve new and upcoming constellations (if any)	
		2. Accuracy :	
		Real Time Kinematics (RTK)	
		Horizontal: 8 mm + 1 ppm RMS	
		Vertical: 15 mm + 1 ppm RMS	
		Initialization time: typically < 5 s	
		- Initialisation reliability >99.9%	
		Post Processing Static	
		Horizontal: 3 mm + 0.5 ppm RMS	
		Vertical: 5 mm + 0.5 ppm RMS	
		Baseline Length: ≤ 80 km	
		3. Special functionalties	
		Extended RTK range - base setup	
		- the base receiver to be able to stream RTK data via integrated GSM modem and to support upto 10 rovers simultaniosly	
		- the base to provide WiFi hotspot functionality for better control/setup of the receiver	
		- the base to provide web interface functionality via any smart phone, tablet or computer	
		- the base to provide NTRIP caster and dyndns functions	
		Increased reliability - rover setup	
		- the rover to provide a mode for better performance under dificult condtions (close to buildings, trees and urban areas)	
		- the rover to be able to connect to any CORS GNSS networks or Single stations via internet	
		4. Communications	
		a) I/O	
		· 2x TNC connector (1 for UMTS antenna and 1 for UHF antenna)	
		· 2x LEMO	
		· 1x high speed USB	
		· Integrated GSM/GPRS modem	
		· Integrated Bluetooth class 2	
		· Optional radio modem (2):	
		Internal Rx/Tx: 403473 MHz	
		External Radio: 1W 35W adjustable (at least 12Km range)	
		. Should be configured to log into any upcoming CORS protocol	

APPENDIX D			
S/No.	**Item Description**	**GEODETIC GLOBAL NAVIGATION SATELLITE SYSTEM SPECIFICATIONS (GNSS)**	**REMARKS**
		. Should be enabled to use SIM card	
		b) Radio Transmission Protocols (RTK)	
		RTCM2.1, RTCM2.3, RTCM3.0, CMR, CMR+ input and output	
		NMEA0183 output	
		5. Data Storage:	
		. Must be able to store raw data	
		. Must have at least 4 GB internal storage	
		. Optional external microSD storage	
		. Device should mount as a USB external hard drive	
		6. Power Supply	
		· Battery life: at least 5 hours in RTK mode	
		· Must have External power input option	
		· Each set should be supplied with two internal battery packs	
		7. Software	
		Two types of software	
		a) for Static	
		· Permanent licence to be included (protected by USB dongle)	
		· Must be able to process raw data (GPS L1&L2, Glonas L1&L2) from leading brands	
		. Must be able to define datums and compute varios trasformations	
		. Must be able to do 3D adjustment	
		· Must be able to export/inport raw data to RINEX format and process the same. This feature must be inclusive of the total cost	
		b) for RTK Supplier should provide licence free field data collection software that has the following key survey operational features:- ▪must provide functions for topo survey ▪must provide functions for stakeout ▪Operating platform - Windows Mobile 6.5 or equivalent	
		8. Sourcing	
		The equipment must be sourced from manufacturer's authorized dealers in Kenya who must be capable of training users and commissioning the equipment for full use.	
		9. Warranty	
		Minimum of One year	