Kenya National Highways Authority

Quality Highways, Better Connections

TENDER No. KeNHA/2978/2026

UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I

JUNE, 2026

DIRECTOR (DEVELOPMENT) **KENYA NATIONAL HIGHWAYS AUTHORITY** **P.O. BOX 49712-00100** **NAIROBI**	**DIRECTOR GENERAL** **KENYA NATIONAL HIGHWAYS AUTHORITY** **P.O. BOX 49712-00100** **NAIROBI**

Table of Contents

SECTION I : INVITATION TO TENDER **4**
PART 1 : TENDERING PROCEDURES **9**
SECTION II - INSTRUCTIONS TO TENDERERS 10
SECTION III - TENDER DATA SHEET (TDS) 30
SECTION IV- EVALUATION AND QUALIFICATION CRITERIA 34
SECTION V - TENDERING FORMS 59
FORM ELI-1.1- TENDERER INFORMATION FORM 60
FORM ELI- 1.2- TENDERER JV INFORMATION 61
FORM ELI - 1.3- QUALIFICATION OF FOREIGN CONTRACTORS 62
FORM ELI - 1.4- DECLARATIONS OF MATERIALS, EQUIPMENT AND LABOUR SOURCES 65
FORM OF TENDER 67
FORM CON – 1 HISTORICAL CONTRACT NON-PERFORMANCE, PENDING LITIGATION AND LITIGATION HISTORY 88
FORM CON – 2: DECLARATION FORM – FAIR EMPLOYMENT LAW AND PRACTICES 90
FORM CON – 3: CERTIFICATE OF BIDDER'S VISIT TO SITE 91
FORM FIN – 3.1: FINANCIAL SITUATION AND PERFORMANCE 92
FORM FIN – 3.2: AVERAGE ANNUAL CONSTRUCTION TURNOVER 96
FORM FIN - 3.3: CURRENT CONTRACT COMMITMENTS / WORKS IN PROGRESS 97
FORM EXP - 4.1: GENERAL CONSTRUCTION EXPERIENCE 98
FORM EXP - 4.2(A): SPECIFIC CONSTRUCTION AND CONTRACT MANAGEMENT EXPERIENCE 99
FORM EXP - 4.2(B): CONSTRUCTION EXPERIENCE IN KEY ACTIVITIES 100
TECHNICAL PROPOSAL 102
FORM OF TENDER SECURITY - DEMAND GUARANTEE 131
PART 2 - WORKS' REQUIREMENTS **132**
SECTION VI - BILLS OF QUANTITIES 133
SECTION VII - SPECIFICATIONS 169
SECTION VIII - DRAWINGS 240
PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS **253**
SECTION IX CONDITIONS OF CONTRACT, PART I -GENERAL CONDITIONS 254
SECTION X CONDITIONS OF CONTRACT, PART II -CONDITIONS OF PARTICULAR APPLICATION 256
SECTION XI - CONTRACT FORMS 267

FORM NO. I - NOTIFICATION OF INTENTION TO AWARD 268
FORM NO. 2 - NOTIFICATION OF AWARD 270
FORM NO. 3 – CONTRACT AGREEMENT 271
FORM NO. 4 - PERFORMANCE SECURITY 272
FORM NO. 6 - ADVANCE PAYMENT SECURITY 273
FORM NO. 7 - RETENTION MONEY SECURITY 275
FORM NO. 8 BENEFICIAL OWNERSHIP DISCLOSURE FORM 276

SECTION I : INVITATION TO TENDER

SECTION 1: INVITATION TO TENDER

TENDER NO. KeNHA/2978/2026: UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I

The Kenya National Highways Authority (KeNHA) is a State Corporation established under the Kenya Roads Act, 2007, with the responsibility for the management, development, rehabilitation and maintenance of national roads.

The Authority invites bids from eligible construction companies registered with the **National Construction Authority (NCA) in Category 1** or equivalent for foreign contractors (however the successful tenderer shall register with the NCA before the signing of the contract) for the **UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I** to be funded through the Government of Kenya Development Fund.

SCOPE OF WORK

The scope of works shall be as described in the tender document.

QUALIFICATION FOR TENDERING

Mandatory Requirements

The following **MUST** be submitted together with the bid;

a) Copy of Certificate of Incorporation or Certificate of Compliance for Foreign Contractors.

b) Copy of Valid Annual Practicing Licence with the National Construction Authority in the class specified above for Citizen Contractors.

c) Copy of Valid Tax Compliance Certificate.

d) Copy of a recent CR12 form (or its equivalent for international firms) issued by the Registrar of Companies, showing the list of directors and ownership structure. *The CR12 form must be dated not earlier than six (6) months from the bid submission deadline.*

e) Bidders must sequentially serialize all pages for each bid document submitted (including cover page). *A Guide on serialization is outlined in the Notes below*

f) The Tender Security (of the Amount indicated in the Tender Document) shall be required in the form of Unconditional Bank Guarantee from a reputable bank in Kenya as prescribed format in the tender document.

Other Requirements

As specified in the tender documents, covering the following: -

1. **Similar previous experience.**
2. **Equipment holding.**
3. **Professional and technical personnel.**
4. **Current work load, Litigation history** and **Current** Sworn Affidavit (i.e. dated within three months of the tender opening date)

5. **Eligibility**

a. Director (s) bidding under different companies for the same tender shall be disqualified

b. Director (s) bidding under different companies should not participate in more than Two (2) tenders

c. Only those bidders registered in the **NCA 1 category** (as indicated in the tender document) shall bid as a **Single Domestic bidder** or its equivalent in case of Foreign Contractors.

d. Bidders to comply with Section 157 of the Public Procurement and Asset Disposal Act, 2015 (PPADA, 2015) on participation of candidates in preference and reservations

e. Bidders with history of **Non-performance** (e.g., failure to complete the projects in the last three (3)) will be disqualified.

f. For **Joint Ventures (JV),** evidence of a duly executed **Joint Venture Agreement** by all parties, clearly stating obligations and liabilities, must be submitted.

6. **Additional Notes**

i. Joint Ventures (JV)

- In the case of a JV, all mandatory requirements must be met by **all JV partners**.
- For domestic JV partners, the NCA category requirements shall be **NCA 1.**
- JV partners shall provide an executable JV agreement with parties nominating a Contractor's Representative. The agreement shall also include clear dispute resolution mechanisms.

ii. Procurement Method:

- Open tender.

iii. Document Verification

- All submitted documents may be verified with the issuing agencies to confirm their authenticity.
- **KeNHA reserves the right to verify all submitted documents.**

iv. Canvassing

- Any form of canvassing will lead to **disqualification**

There shall be **a mandatory pre-tender site visits** as specified in the detailed tender notice as uploaded onto the KeNHA website.

NOTE:

Every Bidder shall be represented by one Technical Person with a Minimum qualification of a B.Sc./B.Tech. in Civil/Highway Engineering. The Individual SHALL bring along the following in hard copies:

1. **Original ID/Passport and a <u>CERTIFIED</u> Copy**
2. **<u>CERTIFIED</u> copy of Degree Certificate**
3. **<u>CERTIFIED</u> Copy of Registration Certificate and proof of current subscription by Engineers Board of Kenya (EBK) / Institute of Engineers of Kenya (IEK)**
4. **Original Introductory letter bearing the Company letterhead and an Official Stamp authorizing them to represent them in the specific pre-tender site visit/Pre-Tender Conference. The letter shall be duly signed. Photocopies or any other media shall not be accepted.**

- The copies of ID/Passport, Academic Certificates, Professional Registration Certificate, proof of current subscription **SHALL** be certified by commissioner of oaths or Notaries public

- All the above documents shall be retained by the Procuring Entity's and may be verified later for authenticity**.**

One (1) person shall only represent one (1) company per Tender.

The detailed tender notice is available in the KeNHA website and Public Procurement Information Portal (PPIP). Clarifications and Questions may be sent to procurement@kenha.co.ke as indicated in the Tender Notice**.**

NOTE:

1. **Every bidder shall make their own arrangements to familiarize themselves with the site conditions and the Road and its features.**
2. **Clarity on Serialization of Tender Documents by Prospective Bidders**

Please note that all pages of the tender documents submitted by bidders shall be sequentially serialized numerically that is; 1,2,3,4,5…etc. The serialization shall be undertaken by the bidder, by doing fresh numbering on its documents. The pagination of the tender documents as downloaded from the KeNHA website should not be used as a means of Serialization. The bidder's serialization should follow the same logical sequence from the first page to the end.

Interested eligible candidates may obtain further information and inspect tender documents from the **Kenya National Highways Authority Headquarters, Barabara Plaza as indicated in the detailed Tender Notice.**

A complete set of tender documents may be obtained by interested tenderers from the Kenya National Highways Authority website: *www.kenha.co.ke* or PPIP portal: *www.tenders.go.ke* free of charge. Bidders are encouraged to download tender documents to minimise physical visits to **KeNHA Headquarters Office**.

Completed tender documents are to be enclosed in plain sealed envelope clearly marked with tender name, reference number and submitted to: -

The Deputy Director, Supply Chain Management
Kenya National Highways Authority
Barabara Plaza,
Jomo Kenyatta International Airport (JKIA), Nairobi, Off Mazao Road,
Block C - 2nd Floor Board Room

or

deposited in the Tender Box at the reception area, **KeNHA - Block C - 2nd Floor Board Room** so as to be received on or before **the date and time indicated in the detailed Tender Notice**

All interested bidders are required to continually check the Kenya National Highways Authority website: www.kenha.co.ke for any tender addendum/addenda or clarifications that may arise before submission date.

Tenders will be opened immediately thereafter in the presence of Tenderers/Representatives who wish to attend at the **Kenya National Highways Authority Headquarters, Barabara Plaza, Jomo Kenyatta International Airport (JKIA), Nairobi, Off Mazao Road, Block C - 2nd Floor Board Room**.

Deputy Director, Supply Chain Management
For: DIRECTOR GENERAL

PART 1 : TENDERING PROCEDURES

SECTION II - INSTRUCTIONS TO TENDERERS

A. GENERAL PROVISIONS

1. Scope of Tender

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

2. Fraud and Corruption

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

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

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

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

3. Eligible Tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.8, or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of 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 goods or works that are the subject of the tender; or

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

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

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

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

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

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

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

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT3.9. A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates inconformity 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 A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA www.ppra.go.ke.

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

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

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

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

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

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

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

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

3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, local subcontracts and labor) from citizen suppliers and contractors. To this end, a foreign tenderer shall provide 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 for this purpose in *"SECTION III-EVALUATION AND QUALIFICATION CRITERIA, Item 9"*.

3.11 Pursuant to the eligibility requirements of ITT4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

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

3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition

Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website www.cak.go.ke.

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

4. Eligible Goods, Equipment, and Services

4.1 Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not ineligible under ITT3.9. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.

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

5. Tenderer's Responsibilities

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

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

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

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

B. CONTENTS OF TENDER DOCUMENTS

6. Sections of Tender Document

6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT10.

PART 1: **Tendering Procedures**

Section I: Instructions to Tenderers

Section II: Tender Data Sheet (TDS)

Section III: Evaluation and Qualification Criteria

Section IV: Tendering Forms

PART 2: **Works' Requirements**

Section V: Bills of Quantities

Section VI: Specifications Section

VII: Drawings

PART3: **Conditions of Contract and Contract Forms**

Section VIII: General Conditions (GCC)

Section IX: Particular Conditions of Contract

Section X: Contract Forms

6.2 The Invitation to Tender Notice 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 a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 10. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

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

7. Clarification of Tender Document, Site Visit, Pre-Tender Meeting

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

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

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

7.4 Minutes of a pre-arranged site visit and those of the pre-tender meeting, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents. Minutes shall not identify the source of the questions asked.

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

8. Amendment of Tender Documents

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

8.2 Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's website in accordance with ITT 7.5.

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

C. PREPARATION OF TENDERS

9. Cost of Tendering

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

10. Language of Tender

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

11. Documents Comprising the Tender

11.1 The Tender shall comprise the following:

a) Form of Tender prepared in accordance with ITT 12;

b) Schedules including priced Bill of Quantities, completed in accordance with ITT 12 and ITT 14;

c) Tender Security or Tender-Securing Declaration, in accordance with ITT 19.1;

d) Alternative Tender, if permissible, in accordance with ITT 13;

e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.3;

f) Qualifications: documentary evidence in accordance with ITT 17 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;

g) Conformity: a technical proposal in accordance with ITT 16;

h) Any other document required in the TDS.

11.2 In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.

12. Form of Tender and Schedules

12.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant 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. The Tenderer shall chronologically serialize all pages of the tender documents submitted.

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

13. Alternative Tenders

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

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

13.3 Except as provided under ITT13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.

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

14. Tender Prices and Discounts

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

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

14.3 The price to be quoted in the Form of Tender, in accordance with ITT 12, shall be the total price of the Tender, including any discounts offered.

14.4 The Tenderer shall quote any discounts and the methodology for their application in the Form

of Tender, in accordance with ITT 12

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

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

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

15. Currencies of Tender and Payment

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

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

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

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

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

16. Documents Comprising the Technical Proposal

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

17. Documents Establishing the Eligibility and Qualifications of the Tenderer

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

17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its

qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.

17.3 If a margin of preference applies as specified in accordance with ITT33. 1, national tenderers, individually or in joint ventures, applying for eligibility for national preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

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

17.5 The purpose of the information described **in ITT 17.2** above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

17.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

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

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

17.9 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 on going, the tenderer will be disqualified from the procurement process,

ii) If the contract has been awarded to that tenderer, the contract award will be set aside,

iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal

offence.

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

18. Period of Validity of Tenders

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

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

19. Tender Security

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

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

i) cash;

ii) a bank guarantee;

iii) a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority; or

iv) a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.

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

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

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

responsive or a bidder declines to extend tender validity period.

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

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

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

b) if the successful Tenderer fails to:

i) sign the Contract in accordance with ITT 47; or

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

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

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

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

20. Format and Signing of Tender

20.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 11 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 13, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number **specified in the TDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

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

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

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

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

D. SUBMISSION AND OPENING OF TENDERS

21. Sealing and Marking of Tenders

21.1 The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:

a) in an envelope or package or container marked "ORIGINAL", all documents comprising the Tender, as describedinITT11; and

b) in an envelope or package or container marked "COPIES" all required copies of the Tender; and

c) if alternative Tenders are permitted in accordance with ITT 13, and if relevant:

i) in an envelope or package or container marked "ORIGINAL - ALTERNATIVE TENDER", the alternative Tender; and

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

The inner envelopes or packages or containers shall:

a) bear the name and address of the Procuring Entity.

b) Bear the name and address of the Tenderer; and

c) Bear the name and Reference number of the Tender.

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

22. Deadline for Submission of Tenders

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

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

23. Late Tenders

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

24. Withdrawal, Substitution, and Modification of Tenders

24.1 A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 20.3, (except that withdrawal notices do

not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

a) prepared and submitted in accordance with ITT 20 and ITT 21 (except that 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 22.

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

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

25. Tender Opening

25.1 Except in the cases specified in ITT 23 and ITT 24.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified **in the TDS**, in the presence of Tenderers' designated representatives and anyone who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS.**

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

25.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.

25.4 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.

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

25.6 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 Bill of Quantities (to be decided on by the tender opening committee) are to be initialed by the members of the tender opening committee attending the opening.

25.7 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 23.1).

25.8 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.

25.9 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 tender opening register shall be issued to a tenderer upon request.

E. Evaluation and Comparison of Tenders

26. Confidentiality

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

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

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

27. Clarification of Tenders

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

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

28. Deviations, Reservations, and Omissions

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

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

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

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

29. Determination of Responsiveness

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

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

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

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

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

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

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

30. Non-material Non-conformities

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

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

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

31. Arithmetical Errors

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

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

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

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

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

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

32. Conversion to Single Currency

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

33. Margin of Preference and Reservations

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

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

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

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

34. Nominated Subcontractors

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

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

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

35. Evaluation of Tenders

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

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

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

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

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

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

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

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

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

36. Comparison of Tenders

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

37. Abnormally Low Tenders and Abnormally High Tenders Abnormally Low Tenders

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

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

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

Abnormally High Tenders

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

37.5 In case of an abnormally high price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written

clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:

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

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

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

38. Unbalanced and/or Front-Loaded Tenders

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

38.2 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 10% of the Contract Price; or

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

d) reject the Tender,

39. Qualifications of the Tenderer

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

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

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

40. Lowest Evaluated Tender

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

a) Most responsive to the Tender document; and

b) The lowest evaluated price.

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

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

F. AWARD OF CONTRACT

42. Award Criteria

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

43. Notice of Intention to enter into a Contract

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

a) the name and address of the Tenderer submitting the successful tender;

b) the Contract price of the successful tender;

c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (c) above already reveals the reason;

d) the expiry date of the Standstill Period; and

e) instructions on how to request a debriefing and/or submit a complaint during the stand still period;

44. Stand still Period

42.1 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.

42.2 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.

45. Debriefing by the Procuring Entity

45.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a concern(s) regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.

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

46. Letter of Award

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

47. Signing of Contract

47.1 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.

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

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

48. Performance Security

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

48.2 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.

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

49. Publication of Procurement Contract

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

a) name and address of the Procuring Entity;

b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;

c) the name of the successful Tenderer, the final total contract price, the contract duration.

d) dates of signature, commencement and completion of contract;

e) names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

50. Procurement Related Complaint

The procedures for making Procurement-related Complaints shall be specified in the **TDS.**

SECTION III - TENDER DATA SHEET (TDS)

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

A. General	
ITT1.1	The reference number of the Invitation to Tender is: **KeNHA/2978/2026** The Procuring Entity is: Kenya National Highways Authority (KeNHA) The name of the ITT is: **Not Applicable** The number and identification of lots (contracts) comprising this ITT T is: **Not Applicable** The Road is: **UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I**
ITT2.3	The information made available to competing firms is as follows: **NONE**
ITT2.4	The firms that provided consultancy services for the contract being tendered for are: ***NONE***
ITT3.1	Maximum number of members in the JV shall be: ***Two (2)***
ITT3.10	Foreign contractors are encouraged to source locally manufactured items/materials and locally assembled machines, equipment, vehicles, labour etc.
B. Contents of Tender Documents	
ITT 7.1	i) The Tenderer will submit any request for clarification in writing at the Address **indicated in the detailed Tender Notice** To reach the Procuring Entity not later than ***7 days*** before bid submission deadline ii) The Procuring Entity will publish the response at the Website ***www.kenha.co.ke***
ITT 7.2	Mandatory Site Visit on **as per the detailed tender notice.**
ITT 7.3	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than the date specified in TDS- ITT 7.1

ITT 7.5	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre- arranged pretender will be published is ***www.kenha.co.ke***
C. Preparation of Tenders	
ITP 11.1(h)	The Tenderer shall submit the following additional documents in its Tender: *As indicated in the Qualification Form/Criteria*
ITT 13.1	Alternative Tenders ***shall not*** be considered. *[If alternatives shall be considered, the methodology shall be defined in Section III, Evaluation and Qualification Criteria.}*
ITT 13.2	Alternative times for completion *shall* ***not be permitted***
ITT 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: ***None***
ITT 14.5	The prices quoted by the Tenderer shall be: ***fixed***
ITT 15.2	Foreign currency requirements: **not allowed**.
ITT 18.1	The Tender validity period shall be ***210days*** from the specified date of opening as indicated in the invitation to Tender
ITT 18.2	a) The Number of days beyond the expiry of the initial tender validity period will be 30 days. (b) The Tender price shall be adjusted by the following percentages of the tender price: *(i)* By 0 % of *the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension,* *and* ***(ii)****By 0 % the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.*
ITT 19.1	A *Bid Security* **IS** required. The amount and currency of the bid security shall be **Twenty Million Kenya Shillings (KShs. 20,000,000.00).** The Bid Security shall be an **unconditional demand guarantee issued by a bank in the format prescribed in the tender document.**
19.2 (h)	The other security is ***Not Applicable***
ITT 19.5	Other documents required are as specified in ***Form No. 3; Contract Agreement***
ITT 19.9	The Procuring Entity will declare the Tenderer ineligible to be awarded

	contracts by the Procuring Entity for a period of ***two (2)*** years.
ITT 20.1	In addition to the original document of the Tender, the number of copies is: ***One Original Only***
ITT 20.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: *Certificate of Independent Tender Determination* ***Part B of Form of Tender***
D. Submission and Opening of Tenders	
ITT 21.3	A tender package or container that cannot fit in the tender box shall be received as follows: shall be received at the Supply Chain Management Offices of the location specified in the tender notice.
ITT 22.1	(A) For Tender submission purposes only, the Procuring Entity's address is: **As indicated in the detailed Tender Notice** Tenders **shall not be submitted** electronically.
ITT 25.1	If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures **specified below** ***Not Applicable***
ITT 25.6	The Form of Tender and the summary page of the Bills of Quantities shall be initialed by representatives of the Procuring Entity **(Tender Opening Committee)** attending Tender opening.
E. Evaluation, and Comparison of Tenders	
ITT 30.3	The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its Lowest estimate.
ITT 31.2	The error shall be considered a major deviation that leads to disqualification of the tender if the percentage of the error (error over the tender price quoted) is: **more than 0% or less than 0%.**
ITT 32.1	The currency that shall be used for Tender evaluation and comparison purposes is-: *Kenya Shillings*
ITT 33.2	A margin of preference *shall* apply. *[If a margin of preference applies, the application methodology shall be defined in Section III - Evaluation and Qualification Criteria.]*
ITT 33.4	The invitation to tender is extended to the following groups that

	qualify for reservations- ALL
ITT 34.1	At this time, the Procuring Entity ***does not intend*** to execute certain specific parts of the Works by subcontractors selected in advance.
ITT 34.2	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 34.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: 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. **N/A**
ITT 35.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 37	Abnormally High/low Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
ITT 38	Unbalanced or Front-loaded Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
ITT 48.2	Additional requirements are: As detailed in the Qualification Criteria/Form
ITT 49.1	The procedures for making a Procurement-related Complaint are available from the PPRA website info@ppra.go.ke or complaints @ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to: For the attention: ***Director General*** Procuring Entity: ***Kenya National Highways Authority (KeNHA)*** Email address: ***dg@kenha.co.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 IV- EVALUATION AND QUALIFICATION CRITERIA

General Provisions

1. General Provisions

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

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

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

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

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

1.3 Evaluation and contract award Criteria

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

2. Preliminary examination for Determination of Responsiveness

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements of *"Part 2 – Procuring Entity's Works Requirements",* including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report for Goods and Works for evaluating Tenders provides clear guidelines on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

i. Financial Capacity:

- The Tenderer shall demonstrate access to, or availability of, **liquid assets, unencumbered real assets, lines of credit, or other financial means** (independent of any contractual advance payment) sufficient to meet the construction cash flow requirement equivalent to **Kshs 400,000,000.00.**
- In the case of a **Joint Venture (JV),** the domestic partner shall provide a line of credit or demonstrate a cash flow capacity of **Kshs 200,000,000.00.**

ii. Minimum Average Annual Construction Turnover

- The Tenderer shall have a minimum average annual construction turnover of **Kshs 1,500,000,000.00**, calculated as the total gross certified payments received for contracts in progress and/or completed within the last five (5) years, divided by five (5).
- In the case of a **Joint Venture (JV),** the domestic partner shall demonstrate an average annual turnover of **Kshs 300,000,000.00** for the same period, also calculated based on total gross certified payments received.

iii. Similar Contracts Executed:

- The Tenderer shall have executed at least **two (2) contracts** of a similar nature, each with a minimum value of **Kshs 2,000,000,000.00**, within the last five (5) years. At least **one (1) contract** shall have been satisfactorily and substantially completed (Eighty Percent) as a **prime contractor** or **joint venture** member within **Kenya or the East African Community.**

iv. Contractor's Representative and Key Personnel:

- The Tenderer shall provide qualified personnel, including a **Site Agent, Site Engineers, Surveyor, Environmentalist, Sociologist** and other key staff, as specified in the tender documents.

v. Contractor's Key Equipment:

- The Tenderer shall possess the necessary equipment listed in the table "Contractor's Equipment" below, including but not limited to [specify requirements].

vi. Other Conditions:

- The Tenderer shall comply with any additional conditions specified in the tender documents, including environmental, safety, and quality standards.

2.1 Assessment of Adequacy of Technical Proposal with Requirements (If Applicable)

The Procuring Entity will evaluate the Technical Proposals of all irresponsive tenders using the following criteria, sub-criteria, and point system for the evaluation of the Technical Proposals:

i. History of non-performance

ii. Financial capability

iii. General and specific experience

iv. Key personnel

v. Contractors Plant and Equipment

vi. Adequacy and quality of the proposed methodology, and work plan in responding to the schedule of Requirements:

Total points for the six criteria: 100points. The minimum technical score (St) required to pass is: 75points.

Tenderers who score less than the required pass will be automatically disqualified. Tenderers who pass the technical evaluation will be evaluated further.

3. Tender Evaluation (ITT 35)

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

i) **Alternative Completion Times,** if permitted under ITT 13.2, will be evaluated as follows:

……**N/A**……

ii) **Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: ……N/A……

iii) **Other Criteria; i**f permitted under ITT 35.2(d): ……N/A…….....

4. Multiple Contracts

Delete in its entirety.

5. Alternative Tenders (ITT 13.1)

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

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

6. Margin of Preference

1.1 If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded one valuated price of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty-one percent (51%).

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

1.3 After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders to shall be classified into the following groups:

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

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

1.4 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 3.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group Band the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

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

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

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

i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings .

ii) Minimum average annual construction turnover of **Kenya Shillings 1,500,000,000.00**, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last **5 years**.

iii) At least **two (2)** of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value **Kenya shillings 2,000,000,000.00**.

iv) Contractor's Representative and Key Personnel, which are specified in the Qualification Criteria.

v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as in the Qualification Criteria.

vi) Other conditions depending on their seriousness.

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

Tenderer and each member of JV incase the Tenderer is a JV, shall demonstrate that Non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last 5 years. The required information shall be furnished in the appropriate form.

d) Pending Litigation

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

e) Litigation History

There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last 5 years. All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

This Section contains all the factors, methods and criteria that the Employer shall use to evaluate applications. The information to be provided in relation to each factor and the definitions of the corresponding terms are included in the respective Application Forms.

1. Eligibility Requirements
2. Historical Contract Non-Performance
3. Financial Situation
4. Technical/Engineering Works Experience
5. Program of Works and Work Methodology
6. Key Professional and Technical Site Staff
7. Major Plant and Equipment to be used in the Project

QUALIFICATION FORM

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
A. PRELIMINARY EVALUATION				
1.	Nationality	Nationality in accordance with ITT 3.6	Forms ELI - 1.1, 1.2 and 1.3, with attachments	
2.	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI - 1.4	
3.	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender	
4.	**PPRA** Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.7	Form of Tender - **Form SD 1**	
5.	State- owned Enterprise	Meets conditions of ITT 3.8	Forms ELI - 1.1 and 1.2, with attachments	
6.	Appendix to Form of Bid	Form properly filled & signed	Appendix to Form of Bid in the Prescribed Format	
7.	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.8.	To be confirmed from Internal records by the procuring entity	
8.	Pending Litigation	Tender's financial position and prospective	Form CON - 1	

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
		long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.		
9.	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer for the last three (3) years.	Form CON - 1	
10.	Declaration of Fair employment laws and practices	Bidders shall declare they are not guilty of any serious violation of fair employment laws and practices and will be bound to abide by the industry CBA at minimum	Form CON - 2	
11.	Declaration of Knowledge of Site /Pre-Bid Conference	● Attend Pre-Tender Site Visits as per TDS, ITT 7.1 ● Bidders to sign attendance register ● Certificate must be signed by the Employer's representative ● Bidders to send Technical Persons for the Site Visit – Min Qualifications – as indicated in the **TENDER NOTICE**.	Form CON - 3	
12.	Tender Security	Tender Security document	a) Form in the Prescribed Format b) Digital Tender Securities will be accepted	

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
13.	Priced Bill of Quantities	- Fill all rates, and amounts, - NO Alterations of the Quantities accepted, - All bidders own Corrections must be Countersigned - NO Errors noted in the Bills of Quantities - Accurate **transfer** of respective major rates from **Schedule G of Part II to the BoQ**	Bills of Quantity in the Prescribed Format	
14.	Annual Practicing License with the National Construction Authority	Proof of registration with the National Construction Authority in **Category-NCA 1 Roads/Bridges Contractor.**	Copy of Current NCA Practicing License	
15.	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.16.	***Provide Valid Tax Compliance Certificate***	
16.	Serialization of the Bid	Bidders shall sequentially serialize all pages of each tender submitted. Any written Pages or document attached or inserted Documents **MUST** be sequentially serialized.	The Serialization MUST be numerically sequential starting from **Numeric 1** (***including the cover page***).	
17.	Completeness of tender document	The person or persons signing the bid **shall** initial all pages of the bid where entries have been made.	All pages with entries (Typed or hand written) must be initialed. Any alterations made in the tender	

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
		Bidders shall own all alterations made to the tender document. Bidders shall duly fill all relevant forms/schedules provided for in the document that requires entries	document must be countersigned. All relevant Forms/ Schedules shall be duly filled	
18.	Proposed weightings	Dully filled and Signed Schedule H	Bidder to fill Schedule H: Basic Prices for Materials and Labour	
19.	Rates derivation	Bidders shall provide current (atleast 28 days before tender opening) proof of cost of materials e.g. Proforma Invoices/quotation (Cement, Bitumen etc)	Bidder to fill Schedule G: Part I. Schedule of Materials; -Basic Prices Part II. Schedule of rates derivation	
B. TECHNICAL EVALUATION				
1.	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default for the last three (3) years. Non-performance shall be deemed to have occurred by evidence of: ● *Termination Letter* ● *Liquidated Damages*	Form CON-1 ***If a bidder fails to disclose, shall be disqualified*** ***Reference to be made to procuring Authority's records*** ***A bidder with any history of non-performance earns zero (0) marks***	2 Marks

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
2.	Financial Capabilities	**(i) Audited Statements:** Bidders shall provide audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last 3 years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability (as demonstrated by Financial Evaluation ratios).	Form FIN - 3.1, with attachments ***Attachments include:*** ***i. Audited accounts*** ***All pages must be initialed and stamped by both a practicing Auditor registered with ICPAK and one of the Directors. Auditor's practicing membership number from ICPAK must be indicated and a valid practicing license shall be provided.***	3 Marks
		(**ii) Working Capital** 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 annual construction cash flow of equivalent to **Kshs 1,500,000,000.00.** In the case of a **Joint Venture (JV),** the domestic partner shall provide a line of credit or demonstrate a cash flow capacity of **Kshs 300,000,000.00.**	● ***Line of Credit*** ● ***Bank statements*** ***Etc***	3 Marks

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
		(iii) Financial soundness The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last 3 years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability. In case of a JV, both partners are required to submit their financial statements and respective Financial ratios	***The Financial ratio Form to be signed by the Auditor registered with ICPAK and one of the Directors*** ● ***Financial Ratios*** Computation shall be made for the following Ratios and marks awarded to each of the ratios: -Working Capital - Debt to Equity Ratio - Current ratio - Operating Cash Flow ratio	4 Marks
3.	Average Annual Construction Turnover	The Tenderer shall have a minimum average annual construction turnover of **Kshs 1,200,000,000.00**, calculated as the total gross certified payments received for contracts in progress and/or completed within the last three (3) years, divided by three (3). In the case of a **Joint Venture (JV),** the domestic partner shall demonstrate an average annual construction turnover of **Kshs 400,000,000.00** for the same period, also calculated based on total gross certified payments received.	Form FIN - 3.2 ***Attachments include Financial Statements and invoices***	2 Marks
4.	Current Commitments/	The total value of outstanding works on the on-going contracts should not exceed the	Form FIN - 3.3	2 marks

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
	Work load Analysis	average annual construction turnover for the last three (3) years. In case of a JVs, the above requirement shall apply.	If the value of the outstanding Works and the new commitment is more than the operating cash flow (based on the last audited financial statement) of the bidder, the bidder loses two marks	
5.	General Construction Experience	Experience under construction contracts in the role of prime contractor, sub-contractor, or management contractor for at least the last 5 years. Grading shall be based on general construction projects handled. Five projects and above earns maximum points and prorated downwards. In case of JVs, the above requirement shall be co-owned.	Form EXP -4.1 ***Attach Letters of Award and Completion Certificates***	5 Marks
6.	Specific Construction &Contract Management Experience	The Tenderer shall have executed upto 3no. contracts of a similar nature, with a minimum cumulative value of **Kshs 2,000,000,000.00**, within the last five (5) years. At least one (1) contract shall have been satisfactorily and substantially completed (over eighty per cent) as a prime contractor or joint venture member within Kenya or the East African Community. *(Incase of a Joint Venture (JV) All members combined must meet requirements*)	Form EXP 4.2(a) ***Provide Letters of Award and Completion Certificates*** ***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.*** • ***Subcontract approval from the Engineer/supervision Authority***	15 Marks

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
7.	4.2(b)Specific Construction & Contract Management Experience – Key Activities	For the above and any other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or Subcontractor in the last five (5) years and Application submission deadline, a minimum construction experience in the following key activities successfully completed: o ***Earthworks Cut/Fills – 400,000m³*** o ***Processing Cement improved material – 120,000m³*** o ***Asphalt Concrete 'Superpave' –10,000m³*** o ***Concrete Works 800m³***	Form EXP 4.2(b) • ***Award letter*** • ***Completion Certificates*** • ***Copies of BoQ*** • ***Copies of Certified Quantities in IPCs***	8 Marks
8.	Contractor's Representative and Key Personnel	Tenderers must demonstrate that it will have a suitably qualified Contractor's Representative and suitably qualified (and in adequate numbers) Key Personnel, as listed below (*Incase of a Joint Venture (JV) All members combined must meet requirements)*	Schedule F (Form PER. 1 and PER. 2) ***Curriculum Vitae (CVs) of the Proposed Key Staff must be presented in the provided format and duly signed by the proposed individual. Copies of certificates and Annual Practicing Licenses (for Engineers) and Academic Certificates for all staff is mandatory.***	15 Marks

	KEY PERSONNEL			**Max 15**
1.	Site Agent	Registration &	Professional Engineer &	2

Item No.	Qualification Subject	Qualification Requirement			*Document To be Completed/provided by Tenderer*		*For Procuring Entity's Use (Qualification met or Not Met)*
			(Max 4marks)	Qualification	Degree (BSc. Civil) holder		
				Relevant experience	10 years and above	2	
					6-9years	1.5	
					Less than 6yrs	0	
		2.	Material Engineer & Structural/ Bridge Engineer (Max 3 marks) Each personnel above earn Max. 2marks	Registration	Professional Engineer	1	
				Qualification	Degree (BSc. Civil) holder	1	
				Relevant experience	10 years and above	1	
					6-9years	0.5	
					Less than 6yrs	0	
		3.	Surveyor (Max 2marks)	Qualification	Degree	1	
					HND	0.5	
				Relevant experience	10 years and above	1.0	
					6-9years	0.5	
					Less than 6 years	0	

Item No.	Qualification Subject	Qualification Requirement			*Document To be Completed/provided by Tenderer*		*For Procuring Entity's Use (Qualification met or Not Met)*
		4.	Foreman (Max 2marks)	Qualification	HND	1	
					Diploma	0.8	
				Relevant experience	10 years and above	1.0	
					6-9years	0.5	
					Less than 6	0	
		5.	Environmental Specialist & Social Specialist Max 2marks)	Qualification and certification	Degree and registration with NEMA	1	
				Relevant experience	10 years and above	1.0	
					6-9years	0.5	
					Below 6 years	0	
		6.	Road Safety Specialist (Max 2marks)	Qualification and certification	Degree holder & occupational health and Safety certification	1	
				Relevant experience	10 years and above	1.0	
					6-9years	0.5	
					Below 6 years	0	

<table>
<tr><th>Item No.</th><th>Qualification Subject</th><th>Qualification Requirement</th><th>Document To be Completed/provided by Tenderer</th><th>For Procuring Entity's Use (Qualification met or Not Met)</th></tr>
<tr><td>9.</td><td rowspan="2">Contractors key equipment</td><td>● Bidders shall declare they have possession/Ownership of various equipment as proposed to be used in the Project by providing Logbooks that demonstrate proof of ownership
● For Bidders planning to hire, they shall provide an Active Lease Agreement in Place that can be used during the Project Life. The copy of logbooks of the lessor(s) shall also be provided.</td><td>Schedule D of Technical Proposal</td><td>30 Marks</td></tr>
<tr><td>10.</td><td colspan="3">
<table>
<tr><th>Main Scope of Works of Tender</th><th>Main Equipment</th><th>Quantity (No) (Minimum)</th><th colspan="2">Marks (Score)</th><th>No. of Equipment to be made available for the Contract by the Bidder</th></tr>
<tr><th></th><th></th><th></th><th>For No. of Equipment Owned by the Bidder</th><th>For No. of Equipment to be hired/ purchased by the Bidder</th><th></th></tr>
<tr><td rowspan="2">Earthworks
Concrete works</td><td colspan="5">a) General Plant</td></tr>
<tr><td>Primary/Secondary Crusher Unit/Power Screen Min capacity – 90t/hr.</td><td>1</td><td></td><td></td><td></td></tr>
</table>
</td></tr>
</table>

Item No.	Qualification Subject	Qualification Requirement		*Document To be Completed/provided by Tenderer*			*For Procuring Entity's Use (Qualification met or Not Met)*
		Bituminous works (AC & Surface Dressing)	Concrete batching plant Min Cap 20 m3/hr	1	3	1.5	
			Asphalt Concrete batching plant.	1			
			b) Bituminous Plants				
			Bitumen Pressure distributor	2	2	1	
			Asphalt concrete paver	1			
			c) Compactors				
			Vibrating compaction plate 300 mm wide	2	1.5	0.5	
			Vibrating compaction plate 600 mm wide	1			
			d) Mobile Compressors				
			Single tool (1.8 m3/min)	1	1.5	1.0	
			Two tool (2.8 – 7.3 m3/min)	1			
			Four tool (11.3 – 25.3 m3/min)	1			
			Medium rock drill (1.5 m3/min)	1			
			Heavy rock drill (2.4 m3/min	1			

Item No.	Qualification Subject	Qualification Requirement					*Document To be Completed/provided by Tenderer*				*For Procuring Entity's Use (Qualification met or Not Met)*
				e) Concrete Equipment							
				Mobile concrete mixers	2	5	2				
				Truck mounted mixers	1						
				Concrete vibrators	5						
				f) Transport (Tippers, dumpers, water tankers)							
				4X2 tippers payload 7 – 12 tonnes	10	12.5	5				
				6X4 tippers payload 16 – 20 tonnes	2						
				8X4 tippers payload 16 – 20 tonnes	1						
				Flatbed lorries	2						
				Water tankers (18,000 – 20,000 lts. capacity)	4						
				g) Diesel Generators							
				Diesel generators (15 – 200Kva)	3	1.5	0.5				
				h) Excavators							

Item No.	Qualification Subject	Qualification Requirement		Document To be Completed/provided by Tenderer			For Procuring Entity's Use (Qualification met or Not Met)
			Hydraulic crawler mounted (7 – 10 tonnes) – 0.25 – 0.4 m3 SAE bucket.	1	8	3.5	
			Hydraulic crawler mounted (10 – 16 tonnes) – 0.40 – 0.60 m3 SAE bucket.	2			
			Hydraulic wheel mounted (7 – 10 tonnes) – 0.25 – 0.4 m3 SAE bucket.	2			
			Hydraulic wheel mounted (10 – 16 tonnes) – 0.40 – 0.6 m3 SAE bucket.	1			
			Hydraulic wheel mounted backloader (7 – 10 tonnes) – 0.25 – 0.4 m3 SAE bucket.	1			
			i) Rollers				
			Self-propelled single drum vibrating (various types)	3	5	1	
			Pneumatic rubber tyre (1-2 tonnes/wheel)	2			
			Sheep's foot roller	2			
			Double drum vibrating roller	2			

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer			For Procuring Entity's Use (Qualification met or Not Met)
			pedestrian rollers	2			
			Pulvimixer	2			
			Motor graders	4			
			Total		40	16	
			Note: Score for Construction Equipment = (X/40)*30 ----Owned = (Y/40)*30----Hired				
11.	Proposed methodology	Adequacy and quality of the proposed methodology	*a)* **Technical approach and methodology** ● Provided a detailed Work Methodology: a) Procedure on execution of activities as outlined in the BoQs b) Allocation of machinery/labour in execution the activities c) Procedures in quality control of the activities described in BoQs ● Provided a Methodology on safety during the construction period:			0-4 Marks	

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
			a) Personal protective equipment b) Signages c) Delineation of construction and passage of traffic d) Passage of traffic at night ● Provide a specific Quality management plan that covers the following: 1. Scope Management 2. Time Management 3. Material Quality Management 4. Financial Management 5. Risk Management 6. Health & Safety Management 7. Communication Management 8. Procurement Management 9. Human Resource Management Stakeholder Management ***b)*** **Work plan*/Program of Works (PoW)*** • PoW Resourced with Equipment-Min. allocation pursuant to the ***Schedule E of Technical Proposal*** - –	

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
			To be submitted in A3 Size Paper well legible Fonts • PoW captures Monthly outputs for each activity • PoW details BoQ Quantities, Units and Rates • PoW is superimposed with Cashflow Projections as detailed in ***Schedule A*** of the technical proposal c) **Site Organization and staffing** (Schedule B of Technical proposal)	0-3 Marks
12.	Environmental & Social impact requirements	Adequacy and quality of the proposed Environmental and social impact requirements	*a)* Relevant plan on Gender issues *b)* Social welfare *c)* Environmental management d) Staffing: • *Environmentalist* • *Sociologists*	1mark 1mark 2mark 0.5mark 0.5mark *The total score will be*

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
				*prorated to a max of **2**mks*
13.	Participation by Kenyan citizens among proposed Key Experts	No of local (Kenyan) key experts from the list of key staff provided under item 7	1. Site Agent 2. Material Engineer & Structural/ Bridge Engineer 3. Surveyor 4. Foreman 5. Environmental Specialist 6. Safety Specialist	1mark 1mark 1mark 1mark 0.5mark 0.5mark *The total score will be prorated to a max of **2**mks*

Tenderers who score less than the required pass (75%) will be automatically disqualified. Tenderers who meet the minimum pass mark in the technical evaluation will be evaluated further.

C. FINANCIAL EVALUATION:

The lowest evaluated bidder shall be subjected to Financial Evaluation which include but not limited to **sensitivity analysis** of the **rates** to **detect abnormally low bids or abnormally high bids or unbalanced tenders or front loaded**.

Treatment of Abnormally Low Bid/Abnormally high Bid/ Unbalanced bid

The Procuring Entity may undertake an analysis of bidders' rates which are potentially lower/higher than the known prevailing market rates. The bidders shall be required to provide objective justification including supporting documents on derivation of their rates within stipulated time to the Procuring Entity (***See Schedule G, Part I&II on Derivation of Rates***).

Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed/provided by Tenderer*	*For Procuring Entity's Use (Qualification met or Not Met)*
In addressing the above criteria, the following steps shall be undertaken by the Procuring Entity; a. **Identify**: The Procuring Entity identifies a potential Abnormally Low/High Bid based on comparison with known prevailing market rates or with the project's total cost estimate. b. **Evaluate**: The Procuring Entity fully analyses the Bidder's justification provided on Schedule G to verify if it is Abnormally Low/High Bid. Due diligence may be carried out by the Procuring Entity on the bidder's documentation. c. **Determination**: The Procuring Entity fully documents the decision to accept or reject the Bid and executes appropriate action(s)/recommendation(s) including but not limited to enhancement of the performance Security. In view of the above, the procuring Entity shall evaluate and analyze the Bidders' submissions against the known prevailing market rates and cost estimation guidelines. The analysis of the bidder's justification shall consider all evidence provided. Accordingly, the Procuring Entity's relevant committee shall make a recommendation to the Accounting Officer.				
D. POST QUALIFICATION: The procuring entity may verify the documents provided by the bidder with the issuing authority.				

APPENDIX TO THE QUALIFICATION CRITERIA

ITEM		DESCRIPTION		POINT SCORE SCALE
1		**HISTORY OF NON-PERFORMANCE**		**Max 2**
		History of Non-Performance		0-2
2		**FINANCIAL CAPACITY**		**Max 12**
	a	Audited Statements		0-3
	b	Working capital		0-3
	c	Financial Ratios attested by CPA		0-4
	d	Average Annual Construction Turnover		0-2
	e	Current Commitments		0-2
3		**EXPERIENCE**		**Max 30**
		General Experience		0-5
		Specific experience in related works		0-15
		Workload Analysis		0-2
		Specific experience as per 4(b)		0-8
4		**KEY PERSONNEL**		**Max 15**
	a	Site Agent		4
	b	Materials Engineer		3
	c	Surveyor		2
	d	Foreman		2
	e	Environmentalist and Social Safeguards specialist		2
	f	Safety Specialist		2
5		**PLANT AND EQUIPMENT**		**Max 30**
		Relevant Equipment (As detailed in Schedule D)	Owned (Max 30 marks)	0-30
			Leased (Max 10 marks)	0-10
6		**WORK METHODOLOGY**		**Max 7**
		Work Methodology		0-4
		Program of Works		0-3
7		Environmental and Social impact requirements		**0-2**
8		Participation by Kenyan citizens among proposed Key Experts		**0-2**
		TOTAL		**MAX 100**

SECTION V - TENDERING FORMS

1. **TENDERER'S QUALIFICATION FORMS**
   - **Form ELI-1.1- Tenderer Information Form**
   - **Form ELI- 1.2- Tenderer JV information**
   - **Form ELI - 1.3- Qualification of Foreign Contractors**
   - **Form ELI - 1.4- Declarations of materials, equipment and labor sources**
2. **FORM OF TENDER**
   - **A. TENDERER'S ELIGIBILITY - CONFIDENTIAL BUSINESS QUESTIONNAIRE**
   - **B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION**
   - **C. SELF-DECLARATION FORMS**
     - **FORM SD1**
     - **FORM SD2**
     - **FORM SD3**
3. **APPENDIX TO FORM OF TENDER**
4. **CONTRACTUAL FORMS**
   - **FORM CON – 1**
   - **FORM CON – 2**
   - **FORM CON – 3**
5. **FINANCIAL FORMS**
   - **FORM FIN- 3 .1**
   - **FORM FIN- 3.2**
   - **FORM FIN- 3.3**
6. **TECHNICAL EXPERIENCE**
   - **FORM EXP - 4.1**
   - **FORM EXP - 4.2 (A)**
   - **FORM EXP - 4.2 (B)**
7. **TECHNICAL PROPOSAL**
   - **SCHEDULE A. Projected Cash Flow**
   - **SCHEDULE B. Site Organizations**
   - **SCHEDULE C. Subcontractors**
   - **SCHEDULE D. Contractor's Equipment**
   - **SCHEDULE E. Initial Tentative Program of Performance**
   - **SCHEDULE F. Key Personnel Proposed**
   - **SCHEDULE D. Schedule of Materials Basic Rates**
8. **FORM OF TENDER SECURITY - DEMAND GUARANTEE**
9. **FORM OF TENDER SECURITY (TENDER BOND)**
10. **FORM OF TENDER-SECURING DECLARATION**
11. **FORM OF DECLARATION OF FAIR EMPLOYMENT LAWS AND PRACTICES**
12. **FORM OF DECLARATION OF CONTRACTS TERMINATED IN THE LAST THREE (3) YEARS**

TENDERER'S QUALIFICATION FORMS

FORM ELI-1.1- TENDERER INFORMATION FORM

Form ELI-1.1
Tenderer Information Form
Date:_____ Tender No. _____ Tender 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: I. *Certificate of Incorporation and CR12* of the legal entity named above, in accordance with ITT 3.6. *II. Copies of National Identification documents for Directors* ☐ In case of a JV, Form of intent to form JV or JV agreement, in accordance with ITT 3.6. ☐ In case of a state-owned enterprise or institution, in accordance with ITT 3,8. documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that tenderer is not under the supervision of the Procuring Entity, 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership (***Applicable***).

FORM ELI- 1.2- TENDERER JV INFORMATION

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

Date:_____

Tender No. _____

Tender 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: i. Certificate of Incorporation and CR 12 of the legal entity named above, including Registered JV agreement (Registration of Documents Act) , in accordance with ITT 3.6 ii. Copies of National Identification documents for all Directors o In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership (***Applicable***).

FORM ELI - 1.3- QUALIFICATION OF FOREIGN CONTRACTORS

Qualification of Foreign Tenderers

Pursuant to ITT 3.10, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition (the 40% Rule).

ITEM	Description of Work Item	Describe location of source	COST in Ksh.	Comments, if any
A	Local Labour			
1				
2				
3				
4				
5				
B	Sub contracts from Local sources			
1				
2				
3				
4				
5				
C	Local materials			
1				

ITEM	Description of Work Item	Describe location of source	COST in Ksh.	Comments, if any
2				
3				
4				
5				
D	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
E	Add any other items			
1				
2				
3				
4				
5				

ITEM	Description of Work Item	Describe location of source	COST in Ksh.	Comments, if any
6				
7				
	TOTAL COST LOCAL CONTENT		xx	
	PERCENTAGE OF CONTRACT PRICE		xx	

FORM ELI - 1.4- DECLARATIONS OF MATERIALS, EQUIPMENT AND LABOUR SOURCES

Pursuant to ITT 5.1, tenderers must complete this form to demonstrate that the tender fulfils this condition

ITEM	Description of Work Item	Describe location of source	Comments, if any
A	**Materials**		
1	10/14mm precoated Chippings		
2	Asphalt Concrete		
3	Cement		
4	Coarse aggregates		
5	Gravel		
6	Road Marking Paints		
B	Equipment		
1	Chippings Spreader		
2	Paver		
3	Tipper		
4	Pneumatic Roller		
5	Concrete Mixer		
C	Labour		
1	Skilled		
2	Unskilled		

ITEM	Description of Work Item	Describe location of source	Comments, if any
3			
4			
5			
6			
	TOTAL COST LOCAL CONTENT		
	PERCENTAGE OF CONTRACT PRICE		

FORM OF TENDER

INSTRUCTIONS TO TENDERERS

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

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

(iii) Tenderer must complete and sign and TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE, CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER, all attached to this Form of Tender.

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

A) Tenderer's Eligibility- Confidential Business Questionnaire
B) Certificate of Independent Tender Determination
C) Self-Declaration of the Tenderer

FORM OF TENDER

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

Invitation to Tender No.: *[insert identification]* Alternative No.: *[Not Applicable]*

To:

_____

We, the undersigned, declare that:

a) *No reservations:* We have examined and have no reservations to the tendering document, including Addenda issued in accordance with Instructions to Tenderers ITT 8.1.

b) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT4;

c) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing Declaration or Proposal-Securing Declaration in Kenya in accordance with ITT 3.9.

d) *Conformity:* We offer to execute in conformity with the tendering document and in accordance with the construction or service schedule the following Works:

[Tender Number and Name]

e) *Tender Price:* The total price of our Tender is [name of currency] (*amount in figures and words*).

f) *Combined Price:* We hereby confirm that our combined price for Rehabilitation Works and Improvement Works does not exceed the threshold given in the TDS ITT 37.5, which is ***[NOT APPLICABLE***].

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

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

i) *One Tender per Tenderer:* We are not submitting any other Tender (s) as an individual Tenderer, 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 4.4, other than alternative Tenders submitted in accordance with ITT 13;

a) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, consultants, 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 Procuring Entity. Further, we are not ineligible under Kenya laws or official regulations or pursuant to a decision of the United Nations Security Council;

b) *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];

c) *Commissions, gratuities and fees:* We have paid, or will pay the following commissions, gratuities, or fees with respect to the Tendering 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.").

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

e) *Not Bound to Accept:* We understand that you are not bound to accept the lowest evaluated cost Tender, the Best Evaluated Tender or any other Tender that you may receive;

f) *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;

g) *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.

r) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from www.ppra.go.ke during the procurement process and the execution of any resulting contract.

s) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:

a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.

b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.

a) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.

b) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.

t) 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]

Name in the capacity of_____ Signed

Duly authorized to sign the Tender for and on behalf of

Dated on_____day of_____, __

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	
1	Name of Procuring Entity	Kenya National Highways Authority
2	Reference Number of the Tender	KeNHA/2978/2026
3	Date and Time of Tender Opening	As indicated in the Tender Notice
4	Name of 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	
	Name, country and full address (postal and physical addresses, email, and telephone number) of Registering Body/Agency	
7	Description of Nature of Business	
8	Maximum value of business which the Tenderer handles	
9	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.

	Name 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.

	Name of Directors	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.

	Name 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 or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the such Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.		

f) Certification

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

Full Name_____

Title or Designation_____

(Signature)

(Date)

B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the **KENYA NATIONAL HIGHWAYS AUTHORITY** for_____[Name of tender]_____[Tender number]

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 [tick 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 and Title_____

Date _____

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

C. SELF-DECLARATION FORMS

FORM SD 1: SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015

I, ..., of Post Office Box.....being a resident of

.....in the Republic of.....do hereby make a statement as follows: -

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of

……...…….. *(insert name of the Company)* who is a Bidder in respect of Tender

No.....for.....*(insert tender*

title/description) for.....……. *(insert name of the Procuring entity)* and duly Authorized and competent to make this statement.

2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.

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

……	……	…….
(Title)	(Signature)	(Date)

Bidder Official Stamp

FORM SD 2: SELF DECLARATION THAT THE TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

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

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

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

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

4. THAT the aforesaid Bidder will not engage/has not engaged in any 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

FORM SD 3: 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.....

APPENDIX 1-FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

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

2. Requirements

1.2 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.

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

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;

2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;

3) Without limiting the generality of the subsection (1) and (2), the person shall be—
   a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
   b) if a contract has already been entered into with the person, the contract shall be voidable;

4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;

5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement—
   a) shall not take part in the procurement proceedings;
   b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
   c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.

6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;

7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5) (a) and the contract is awarded to the person or his relative or to another person in whom one of them had a director indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

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

i) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows: “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 all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

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

---

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

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

APPENDIX TO FORM OF TENDER

(This appendix forms part of the bid)

Conditions	**Sub-Clause**	**Data**
Employer's name and address	1.1.2.2	Director General, Kenya National Highways Authority, P.O. Box 49712 – 00100, **NAIROBI**
Engineer's name and address	1.1.2.4	Director – Development, Kenya National Highways Authority, P.O. Box 49712 – 00100, **NAIROBI**
Time for Completion	1.1.3.3	Thirty-Six (36) Months
Defects Notification Period	1.1.3.7	Twenty-Four (24) Months
Site	1.1.6.7	**UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I**
Communications	1.3(b)	The Employer's address is: The Director General, Kenya National Highways Authority (KeNHA), P.O. Box 49712 - 00100 NAIROBI The Engineer's address is: The Director, Development, Kenya National Highways Authority (KeNHA), P.O. Box 49712 - 00100 NAIROBI **The Contractor address is:** Name…….……...…… P.O Box…….……..…….. City/Town…….....…… Email: ……..……. Telephone…….…….
Governing Law	1.4	Laws of the Republic of Kenya

Conditions	Sub-Clause	Data
Ruling and communications language	1.4	English
Contract Agreement	1.6	Within the bid validity period
Assignment	1.7	Not applicable
Care and Supply of documents	1.8	One (1) Contract document to be supplied to the Contractor
Right of access to the Site	2.1	Within Twenty-Eight (28) days of the Notice of Commencement Date
Performance Security	4.2	The Performance Security shall be in the form of an unconditional Bank Guarantee in the amount(s) of 10% of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount and submitted by the 28th day from the date of the letter of acceptance.
Subcontractors	4.4	Maximum of forty per cent (40%) of the permanent works.
Parts of the Works for which subcontracting is not permitted	4.4	N/A
Progress reports	4.21	Softcopies
Penalty for not implementing any of the approved ESMP, OSH and Safety Plan.	4.8	Upto Kshs. 50, 000.00 per day to a limit of 3% of the Contract sum.
Normal working hours	6.5	Weekdays: 8am – 5pm (With 1hour break) Saturdays: 8am – 12 Noon
Commencement of Works	8.1	Twenty Eight (28) days after order to commence
Programme	8.3	• Electronic through the CPM tool • One (1) Hard copy • Within 28days
Delay damages payable for each day of delay	8.7	0.05% of the Accepted Contract Amount

Conditions	Sub-Clause	Data
Maximum amount of delay damages	8.7	5% of the Accepted Contract Amount
Take Over of Parts of the Works	10.2	The employer shall appoint a committee to inspect and accept the works before the Engineer issues the Taking Over Certificate for 50% of the completed road section, including road marking and furniture.
Provisional Sums	13.5 (b)(ii)	As specified in the Schedule of rates
Adjustment to Changes in cost	13.8	(i) Current indices or prices in the Interim Payment Certificate should be those prevailing on the month when 28 days prior to the last day of the period falls to which a particular IPC is to be released. (ii) In cases, the Contractor failed to complete the works within the "Time of Completion", CPA calculation thereafter has be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time of Completion of the Works, or (ii) the current index or price: whichever is more favorable to the Employer. 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. (iii) The Price Adjustment provision shall not be applicable if the contract is not completed in time due to the delay caused by the contractor. (iv) The price adjustment will not be applicable if the prices of the construction material increase or decrease with +/- 10% of the base rate. (v) Variation of Price shall be calculated based on each month's financial statements from the Contractor. Monthly statements shall be taken as the indices prevailing for the month

Conditions	Sub-Clause	Data
		when the first date of valuation period of current IPC fall. (vi) In case of negative price escalation, the amount will be deducted from the IPC.
Advance payment	14.2	The Employer **MAY** pay up to a maximum of 10% of Contract Sum (in installments) after signing of contract, issuance of order to commence and submission of advance payment bank guarantee. NB Upon one month of request by the Employer, the Contractor will be required to submit evidence of utilization of the advance payment for the project as follows: i. Establishment ii. Materials and iii. Equipment Any portion of the advance payment not utilized in accordance to the conditions of this clause **SHALL** lead to employer recalling the advance payment Guarantee immediately.
Application for interim payment certificates (Statements)	14.3	1 hard copy and 1 soft copy
Percentage of retention	14.3(c)	5% of the Accepted Contract Amount
Limit of Retention Money	14.3(c)	5% of the Accepted Contract Amount
Schedule of payments	14.4	Payment shall be by milestone as shown in **Table A.**
Minimum Amount of Interim Payment Certificates	14.6	Milestone in accordance with the payment schedule
Period of payment of Advance Payment to the Contractor	14.7(a)	Ninety (90) days
Period for the Employer to make interim payments to the Contractor	14.7b	Ninety (90) days

Conditions	Sub-Clause	Data
Period for the Employer to make final payment to the Contractor	14.7(c)	Ninety (90) days
Delayed payment	14.8	Simple interest at a rate equal to two percentage points above the mean Base Lending Rate obtained from the Central Bank of Kenya
Number of additional paper copies of draft Final Statement	14.11	1 hard copy and 1Soft copy
Currencies of Payment	14.15	Kenya Shillings (KES)
Maximum total liability of the Contractor to the Employer	17.6	The accepted contract amount
Periods for submission of insurance	18.1	a. evidence of insurance – 14days b. relevant policies – 28 days
Maximum amount of deductibles for insurance of the Employer's risks	18.2(d)	Not Applicable
Minimum amount of third party insurance	18.3	Limited to Accepted Contract Amount for each occurrence, with unlimited number of occurrences
Date by which the DB shall be appointed	20.2	As and when required
The DB shall be comprised of	20.2	Three Members (ad hoc)
Appointment (if not agreed) to be made by:	20.3	Chartered Institute of Arbitrators (Kenya)
Place and Seat of arbitration	20.6(a)	Nairobi, Kenya

Signature of Tenderer……. Date ……

Table A: SCHEDULE PAYMENTS

Q/No.	Milestone	Payment Date	Valuation	Recovery of advance
1.	On attainment of 10% of project length to bitumen standard		Full value of Milestone as per approved measured works	
2.	On attainment of 20% of project length to bitumen standard		Full value of Milestone as per approved measured works	Start recovery as per clause 14.2
3.	On attainment of 30% of project length to bitumen standard		Full value of Milestone as per approved measured works	
4.	On attainment of 40% of project length to bitumen standard		Full value of Milestone as per approved measured works	
5.	On attainment of 50% of project length to bitumen standard		Full value of Milestone as per approved measured works	
6.	On attainment of 60% of project length to bitumen standard		Full value of Milestone as per approved measured works	
7.	On attainment of 70% of project length to bitumen standard		Full value of Milestone as per approved measured works	
8.	On attainment of 80% of project length to bitumen standard		Full measure of Milestone as measured work including with all 30% of road furniture	
9.	On attainment of 90% of project length to bitumen standard		Full measure of Milestone as measured work including with all 30% of road furniture	

10.	On attainment of 100% of the entire project scope.		Full measure of Milestone as measured work including remaining 40% the road furniture, claims, interests etc..	

Notes

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.
2. For assigned or formally sub-contracted works, a milestone shall constitute 10% of the total length assigned or formally sub- contracted, having all pavement layers, access culverts, cross pipe culverts and functioning drains.
3. Works done as part of safety installations such as guardrails and road bumps shall be paid within the milestone.
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) will be valued and paid together with due milestone payments.
6. Road Furniture and road marking will form part of the completed mile stone for milestones 8, 9 and 10.
7. In case of an emergency, the cost of repair shall be paid in the succeeding milestone. Such emergency works shall be subject to Employer's approval.
8. Emergency works may be undertaken as dayworks or as approved under Contigencies.

FORM CON – 1 HISTORICAL CONTRACT NON-PERFORMANCE, PENDING LITIGATION AND LITIGATION HISTORY

Tenderer's Name: _____ Date:_____

JV Member's Name_____

Tender No. _____

Tender title: _____

Non- Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐Contract non-performance did not occur for the last five (5) years from the day of tender opening. ☐Contract(s) not performed for the last five (5) years from the day of tender opening			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (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, Qualification Criteria and Requirements			
☐ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 8. ☐ Pending Litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 9 as indicated below			
Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (Kenya Shilling equivalent)**
		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 (Kenya Shilling equivalent)**

FORM CON – 2: DECLARATION FORM – FAIR EMPLOYMENT LAW AND PRACTICES

Date

To

The Director General,

Kenya National Highways Authority (KeNHA),

P.O. Box 49712-00100

NAIROBI

We (name and address)_____

_____declare the following:

1. Have not been involved in and will not be involved in violation of fair employment laws and practices.
2. THAT what is declared hereinabove is true to the best of my knowledge, information and belief

---------- ---------- ----------

Name of Bidder's authorized Representative Signature Date

(To be signed by authorized representative and officially stamped)

FORM CON – 3: CERTIFICATE OF BIDDER'S VISIT TO SITE

This is to certify that

[*Name/s*]…….

Being the authorized representative/Agent of [*Name of bidder*]

……..……

……..……
participated in the organized inspection visit of the site of the works for the

UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I

CONTRACT NO: KeNHA/2978/2026

held on……..day of……20…….

Signed……..
(Employer's Representative)

……..……

…… ……..
(Name of Employer's Representative) (Designation)

NOTE: This form is to be completed at the time of the organized site visit.

FORM FIN – 3.1: FINANCIAL SITUATION AND PERFORMANCE

PART 1

Tenderer's Name: _____ Date:_____

JV Member's Name_____

Tender No. _____

Tender title: _____

1. **Financial data**

Type of Financial information (Kenya Shillings)	**Historic information for previous 5 years, _____(amount in Millions (KSh.)**				
	2021	2022	2023	2024	2025
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

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	Letter of line of Credit from a recognized Financial Institution	
2	Bank account balance (demonstrated by bank statements)	

3. Financial documents

The Tenderer and its parties shall provide copies of financial statements for the last ***five (5)*** 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 for the five (5) years required above; and complying with the requirements

PART 2

Detailed Financial Situation Evaluation

No.	Description	Auditors Assessment 2021	Auditors Assessment 2022	Auditors Assessment 2023	Auditors Assessment 2024	Auditors Assessment 2025	Evaluation Score Award Criteria
1.	Financial Ratios						Max score=4 Marks
a.	**Current Ratio= Current Assets / Current Liabilities**						Current Ratio more than 1 = 1 marks
b.	**Debt to Equity Ratio = Total Liabilities / Total Equity**						Equity Capital Ratio less than 1 = 1 Marks
c.	**Working Capital = Current Assets- Current Liabilities**						Positive Working Capital = 1 marks
d.	**Operating Cash Flow Ratio = Cash Flow from Operations / Current Liabilities**						Operating Cash-flow more than 1 = 1 marks
2.	**Working Capital in KShs. …….**						Working Capital is equal or more than 10% of the bid price = 5 Marks

The above Financial Ratios have to be derived from first Principles from the Audit Statements. The Auditor who has undertaken the analysis has to demonstrate the financial ratios and append his signature and stamp to the Document as below:

The Auditor shall be required to provide his/her workings and demonstrate the source of the workings from the various Audited statements by including the Page Numbers and references of the source of the figures used in the computation of the assigned values.

The Auditor undertaking the above Financial Analysis MUST duly fill the Contact Sheet below in all aspects and attach current annual practising license.

Financial ratios Computed by a Certified Public Accountant:

CPA: Name	
ICPAK Number	
Telephone Number	
Email Address	
Postal Address	
Physical Address	
Contact Person	
Mobile Contact of the Contact Person	
Signature	
Date	
Personal/Corporate Stamp	

Ratios attested by the Company Director:

Director's Name	
ID/Passport Number	
Telephone Number	
Email Address	
Postal Address	
Physical Address	
Signature	
Date	
Personal/Corporate Stamp	

FORM FIN – 3.2: AVERAGE ANNUAL CONSTRUCTION TURNOVER

Tenderer's Name: _____

Date: _____

JV Member's Name _____

Tender No. _____

Tender title: _____

	Annual turnover data (construction only)		
Year	**Amount Currency** *[insert amount and indicate currency]*	**Exchange Rate (where applicable)**	**Kenya Shilling equivalent**
2021			
2022			
2023			
2024			
2025			
Average Annual Construction Turnover*			

* See Section III, Evaluation and Qualification Criteria.

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

FORM FIN - 3.3: 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 Form of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Procuring Entity's Contact Address, Tel, Fax	Value of Outstanding Work (Kenya Shilling equivalent)	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [KSh./month]

FORM EXP - 4.1: GENERAL CONSTRUCTION EXPERIENCE

Tenderer's Name: _____

Date: _____

JV Member's Name _____

Tender No. _____

Tender title: _____

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name: Brief Description of the Works and Services performed by the Tenderer: Amount of contract: Name of Procuring Entity: Address:	*Main Contractor/ Subcontractor/ Management Contractor*
		Contract name: Brief Description of the Works and Services performed by the Tenderer: Amount of contract: Name of Procuring Entity: Address:	
		Contract name: Brief Description of the Works and Services performed by the Tenderer: Amount of contract: Name of Procuring Entity: Address:	

FORM EXP - 4.2(A): SPECIFIC CONSTRUCTION AND CONTRACT MANAGEMENT EXPERIENCE

Tenderer's Name: _____

Date: _____

JV Member's Name _____

Tender No. _____

Tender 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 Shillings	
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				
Description of the similarity in accordance with Sub-Factor 4.2(b) of Section III:				
1. Amount				
2. Physical size of required Works and Services items				
3. Complexity				
4. Methods/Technology				
5. Construction rate for key activities				
6. Other Characteristics				

FORM EXP - 4.2(B): CONSTRUCTION EXPERIENCE IN KEY ACTIVITIES

Tenderer's Name:

_____

Date:_____

Tenderer's JV Member Name: _____

Sub-contractor's Name (as per ITT 33.2):_____

Tender No. _____

Tender title: _____

All Sub-contractors for key activities must complete the information in this form as per ITT 33.2 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One:_____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contact	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-Contractor ☐
Total Contract Amount			Kenya Shillings	
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)*(ii)
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name: Address: Telephone/fax number E-mail:				

Information	
Description of key activities in accordance with Sub-Factor 4.2(b) of Section III:	
Earthworks	
Gabion protection works	
Concrete works	
Surface Dressing	
Asphalt Concrete works	

If applicable

2 Activity No. Two

3. .....

TECHNICAL PROPOSAL

The Tenderer's Technical Proposal shall include the following elements:

SCHEDULE A. Projected Cash Flow

SCHEDULE B. Site Organizations

SCHEDULE C. Subcontractors

SCHEDULE D. Contractor's Equipment

SCHEDULE E. Initial Tentative Program of Performance

SCHEDULE F. Key Personnel Proposed

Instructions on how to present the various schedules of the Technical Proposal are given on the following pages

SCHEDULE A

Projected Cash Flow

1) Tenderers shall tabulate below estimates, based on their preliminary work programme, of:

   a) On the expenditure side, the value of the work which will be carried out;

   b) On the revenue side, the net payments to which they will become entitled with due allowance for the advance payment and repayment, materials prepayments, and retention money, but excluding price adjustments for rise and fall and provisional sums for emergency works.

   c) The projected net cash flow during the contract period.

2) The prospective successful Tenderer may be required to submit full details to substantiate his estimates.

Period (Months)	Cost of construction Works	Net Payment to be received	Net Cashflow
1-3			
3-6			
6-9			
9-12			
12-15			
15-18			
18-21			
21-24			
24-27			
27-30			
30-33			
33-36			

SCHEDULE B

Site Organization

Tenderers shall give below full particulars of the organization they propose to establish, direct, and administer the performance of the Contract. In particular, Tenderers shall indicate the location of site camps and the resources they intend to allocate to Self-Control Units for planning and monitoring purposes.

1. SITE ORGANIZATION CHART
    i. ORGANOGRAM
    ii. SITE ORGANISATION LAYOUTS
    iii. SITE LOCATION MAP
2. NARRATIVE DESCRIPTION OF SITE ORGANIZATION CHART

SCHEDULE C

SUB-CONTRACTORS / PARTNERS

Tenderers shall list below those parts of the Works and Services which they propose to subcontract, and state the approximate value of those parts and the names and addresses of the proposed subcontractors, if those are known at Tendering stage. Tenderers shall also list other business partners involved in the execution of the contract and their respective roles and responsibilities.

Part of Works / Services:

Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services: Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services: Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services: Approximate value:

Name and address of proposed subcontractor / partner:

SCHEDULE D

Contractor's Equipment Form EQU

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 in Section B (Technical Evaluation) of Qualification Form.

Equipment Information and current status for equipment leased from Government Agencies may be omitted

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 equipment ☐ Owned ☐ Rented ☐ Leased ☐ 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	
Agreements	Details of rental/ lease/ manufacture agreements specific to the project	

SCHEDULE E

Initial Tentative Program of Works

To demonstrate a clear understanding of the requirements of the Contract, Tenderers shall provide the following:

i) A bar chart sub-divided into sections for each road showing the major activities to be carried out for Maintenance Works. The activities shall be shown against time, with linkages shown between related/sequential activities as far as possible and appropriate.

ii) A bar chart or schedule showing the usage of major plant, including those listed in Schedule D (Contractor's Equipment).

SCHEDULE F

Form PER -1 Key Personnel Schedule

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

Key Personnel

1.	**Title of position: Site Agent**	
	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/weeks/months that has been scheduled for this position]*
	Expected time schedule for this position:	***Full time site presence***
2.	**Title of position: Foreman**	
	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/weeks/months that has been scheduled for this position]*
	Expected time schedule for this position:	***Full time site presence***

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Form PER -2

Resume and Declaration – Key Personnel- (*Resume to be provided in this format***)**

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 Tendering Entity:**	
	Telephone:	**Contact (manager/personnel officer):**
	Fax:	
	Job title:	**Years with present 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 Key Personnel, 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 Key Personnel is available to work on this contract]*
Time commitment:	*[insert the number of days/weeks/months that this Key Personnel will be engaged]*

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

a) be taken into consideration during Tender evaluation;

b) my disqualification from participating in the Tender;

c) my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature:_____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

SCHEDULE G

PART I. SCHEDULE OF MATERIALS; -BASIC PRICES

.

ITEM NO	DESCRIPTION	NAME OF SUPPLIER	COUNTRY OF ORIGIN	UNIT	BASE PRICE	
					KSHS	CTS
1.	Cut-back Bitumen MC 30 in bulk			Litre		
2.	Cut-back Bitumen MC 30 in drums			Litre		
3.	Bitumen 80/100 in bulk			Kg		
4..	Bitumen 80/100 in drums			Kg		
5..	Bitumen Emulsion K1-70 in bulk			Litre		
6.	Bitumen Emulsion K1-70 in drums			Litre		
7.	Petrol, Regular Grade			Litre		
8.	Petrol, Premium/ super Grade			Litre		
9.	Automotive Diesel Fuel			Litre		
10.	Industrial Diesel Oil			Litre		
11.	Industrial Fuel Oil			Litre		
12.	Kerosene Fuel			Litre		
13.	Cement			Tonne		
14.	Flex beam Guardrail			Metre		
15.	Gabion Mesh			M^2		
16.	Reinforcing Steel			Tonne		
17.	Lime			Tonne		

I certify that the above information is correct

…….…… …… …….

(Title) (Signature (Date)

Notes:

- The prices inserted above shall be those prevailing 30 days before the submission of Tenders and shall be quoted in Kenya Shillings using the prevailing exchange rates by Central Bank Kenya.
- Prices of imported materials to be quoted CIF Mombasa or Nairobi as appropriate depending on whether materials are imported by the tenderer directly or through a local agent.

PART II. SHEDULE OF RATES DERIVATION
(Sample Copy for Guidance)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	16-80-001
Description	Provide, lay and compact Asphalt Concrete Type 1 wearing course to carriageway
Units	M^3
Quantity	654.00 (Assumed production is 160m^3 per day)

Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
AC Type 1	M^3	1	20,900.00	20,900.00
Sub Total For Material				**20,900.00**

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Skilled Labour overseer	2	1,800.00	22.50
Skilled Labour - Operator	6	2,045.00	76.69
Artisans Grade II	12	1,612.00	120.90
Unskilled labour	15	873.00	81.84
Sub Total for Labor			**301.93**
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Drum Roller	1	38,720.00	242.00	Hired
Pneumatic Roller	1	29,200.00	182.00	Hired
Air Compressor	1	9,625.00	60.16	Hired
Bitumen Sprayer Hand operated	1	4,400.00	27.50	Hired
AC Paver	1	50,504.00	315.65	Hired
Sub Total for Machinery			**827.81**	
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	**22,029.74**
ii) Haulage Cost	1,104.49
Sub-totals of DC	23,131.22
b) Indirect Cost	2,313.12
c) Overheads and Profits	6,939.37
Total Cost Sum (a+b+c) Carried forward to the BoQ	**32,383.71**

SAMPLE

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	8.05
Description	Provide and place class 15/20 concrete to beds
Units	M^3
Quantity	430

Rate build up

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	
ii) Haulage Cost	
Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	12.01
Description	Provide, transport, spread, and compact natural gravel for subbase as directed by the Engineer
Units	M^3
Quantity	128,625

Rate build up

a) Direct cost (DC)

i) Unit work price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	
ii) Haulage Cost	
Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	12.02
Description	Provide, transport, spread, and compact natural gravel for base as directed by the Engineer
Units	M^3
Quantity	115,500

Rate build up

a) Direct cost (DC) i) Unit work Price 1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	
ii) Haulage Cost	
Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	14.02
Description	Allow for mixing in cement and/or lime into natural gravel or GCS
Units	M^3
Quantity	244,125

Rate build up

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	15.01
Description	Prepare surface of carriageway, junctions, accesses etc, provide and spray MC 30 cut-back bitumen as prime coat at a rate of 1.0-1.2 lt/m2 or as directed by the Engineer
Units	Litres
Quantity	735,000

Rate build up

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	15.02
Description	Prepare AC surface, provide and spray 80/100 penetration Grade bitumen as binder for single seal on Carriageway at a spray rate of 1.1-1.3 lts/m2 or as directed by the Engineer
Units	Litres
Quantity	882,000

Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	15.03
Description	Provide, spread and roll 10/14 mm precoated chippings as single seal on Carriageway at a spread rate of 75 - 90 m2/m3 or as directed by the Engineer
Units	M^3
Quantity	8,750

Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost Sum (a+b+c) Carried forward to the BoQ	

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..…	……	…….
(Title)	(Signature)	(Date & Official Stamp)

PART II. SHEDULE OF RATES DERIVATION

(For use during Tender Evaluation)

Form for Detailed Breakdown of Cost Comparison

Bill item No.	16.02
Description	Provide, transport over any distance, lay and compact 50mm asphalt concrete on the main and access roads' carriageway and shoulders in accordance with the special specifications, drawings and as directed by the Engineer.
Units	M^3
Quantity	36,750

Rate build up

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
Sub Total For Material				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Sub Total For Labor			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Sub Total for Machinery				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC	
b) Indirect Cost	
c) Overheads and Profits	
Total Cost	

Sum (a+b+c) Carried forward to the BoQ		

Notes:

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: https://krb.go.ke/downloads

I certify that the above information is correct

……..… …… …….

(Title) (Signature) (Date & Official Stamp)

SCHEDULE H:

BASIC PRICES FOR MATERIALS AND LABOUR

Index Code*	**Index Description***	**Source of Index***	**Base Value and Date***	**Bidder's Weighting**	**Weighting Range**
Fixed	Nonadjustable	KNBS 2019 Civil Cost Engineering – 2019 Indices rebased	28 days before tender opening date	0.40	A= 0.40
EQ	Equipment				B= 0.1– 0.25
LL	Labour				C= 0.09 - 0.18
MT	Materials				D= 0.14 - 0.26
TF	Transport & Fuel				E= 0.01 - 0.09
Total				**1.0**	

Notes:

- The Base year for the indices shall be 2019.
- Variation of Price will be applied on monthly financial statements and will become effective 12 months after commencement of the Works

- The Base year for the indices shall be 2019.
- Tenderer to insert Bidder's weighting coefficients in column 5, within the range specified in column 6, for each index in the table above.
- Entered coefficients should add up to one for use in the variation of price formula below. Refer to FIDIC Clause 13.8: Adjustment for Changes in Cost.

$$P_n = A + B\frac{E_n}{E_0} + C\frac{L_n}{L_0} + D\frac{M_n}{M_0} + E\frac{T_n}{T_0}$$

I certify that the above information is correct.

……..… …… …….

(Title) (Signature) (Date & Official Stamp)

FORM OF TENDER SECURITY - DEMAND GUARANTEE

Beneficiary:_____

Invitation to Tender No:_____ Date: _____

TENDER GUARANTEE No.:_____

Guarantor:_____

We have been informed that_____(herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution of under Invitation to Tender No.____(“the ITT”).

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

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 Form of Tender (“the Tender Validity Period”), or any extension there to be 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 be provided by the Applicant, (i) has 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 Beneficiary's Tendering document.

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, issued to the Beneficiary in relation to such contract agreement; 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.

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

_____

[signature(s)]

PART 2 - WORKS' REQUIREMENTS

SECTION VI - 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 will be made on completed milestones
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 Dayworks) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer in accordance with Sub-Clause 13.6 of Part I of the Conditions of Contract.
8. The price and rates entered in the Bills of Quantities shall, except insofar 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 (excluding VAT) 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. Errors in the pricing of the Bills of Quantities will be corrected in accordance with Clause 29 of instructions to bidders.
10. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
11. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.

12. The method of measurement of completed work for payment shall be in accordance with Standard Specification for Road and Bridge Construction of the Ministry of Transport and Communications, 1986.
13. "Authorised" “Directed" or "Approved" shall mean the authority, direction or approval of the Engineer.
14. 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 of the requirements of the plans and specifications will not be paid for, unless ordered in writing by the Engineer.
15. Units of Measurement and abbreviations used herein shall have the following meanings:

Unit	**Abbreviation**	**Unit**	**Abbreviation**
cubic meter	m^3 *or* cu m	millimeter	mm
hectare	ha	month	mth
hour	hr	number	No.
kilogram	kg	provisional sum	P.S.
kilometre	km	square meter	m^2 *or* sq m
lump sum	L.S.	square millimeter	mm^2 *or* sq mm
meter	m	vehicle	veh
metric ton (1,000 kg)	t	week	wk
months	mths		

UPGRADING OF IMARORO - MASHURU - ISARA ROAD - PHASE I		
SUMMARY OF BILL OF QUANTITIES		
BILL №	**DESCRIPTION**	**AMOUNT BILLED (KSHS)**
1	GENERAL:OFFICE ADMINISTRATION AND OVERHEADS/PRELIMINARIES	
4	SITE CLEARANCE	
5	EARTHWORKS	
7	EXCAVATION AND FILLING FOR STRUCTURES	
8	CULVERT AND DRAINAGE WORKS	
9	PASSAGE OF TRAFFIC	
12	NATURAL MATERIAL BASES AND SUBBASES	
13	GRADED CRUSHED STONE	
14	CEMENT AND LIME TREATMENT	
15	BITUMINOUS SURFACE TREATMENT AND SURFACE DRESSING	
16	BITUMINOUS MIXES	
17	CONCRETE WORKS	
20	ROAD FURNITURE REPAIR AND MAINTENANCE	
21	MISCELLANEOUS BRIDGE WORKS	
25	CROSS CUTTING ISSUES	
26	HIV/AIDS AWARENESS AND EDUCATION	
27	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	
1	**SUB TOTAL 1**	
	Add 10% of Sub-Total 1 of Bills as Provisional Sums for Contingencies to be Expended in the whole or part as directed by the Engineer in accordance with clause 13(5) of the Conditions of Contract.	
	Add 15% of Sub-Total 1 of Bills as Provisional Sums for Variation of Price in accordance to Clause 13 (8) of the Conditions of Contract.	
2	**SUB-TOTAL (2)**	
3	**Add 16% of Sub-Total (2) for V.A.T**	
4	Add: Public Procurement Capacity Building Levy @ 0.03% of Sub Total (2)	
	GRAND TOTAL CARRIED FORWARD TO FORM OF BID (SUB-TOTAL 2+3+4)	

BILL NO.1	GENERAL: OFFICE ADMINISTRATION AND OVERHEADS/PRELIMINARIES				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
1.01	Provide or rent and maintain Engineers Representative and his staff office for the duration of contract.	Item	1.00		
1.02	Furnish and maintain Engineers Representative office for the duration of contract as per Appendix to Bill No. 1.02	Item	1.00		
1.03	Provide and maintain Laboratory for Engineer's representative and his staff.	Item	1.00		
1.04	Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item. See attached Appendix to Bill No. 1.04	Item	1.00		
1.05	Allow Prime Cost (P.C.) sum of Kshs. 12,000,000.00 for survey works	PC Sum	1.00	12,000,000.00	12,000,000.00
1.06	E.O. item 1.05 for the contractor's overheads and profit.	%	12,000,000.00		
1.07	Provide, fuel and maintain with a driver two (2) new station wagon vehicle of engine capacity min. 3000cc diesel propelled fully loaded as per cl. 138 of special specs and approved by the Engineer, inclusive of the first 4000km per vehicle month.	v.mth	72.00		
1.08	E.O Item 1.07 for mileages over 4000km per vehicle month.	km	72,000.00		
1.09	Provide, fuel and maintain with drivers five (5) new 4WD double cabin pickups of 2500cc minimum engine capacity fully loaded as approved by the Engineer, inclusive of the first 4000km per vehicle month.	v.mth	180.00		
1.10	E.O Item 1.09 for mileages over 4000km per vehicle month.	km	144,000.00		
1.11	Allow Prime Cost (P.C.) sum of Kshs. 5,000,000.00 for the Resident Engineer's Miscellaneous account to be spent in whole or part as directed by the Resident Engineer against receipts.	PC Sum	1.00	5,000,000.00	5,000,000.00
1.12	E.O. item 1.11 for the contractor's overheads and profit.	%	5,000,000.00		

BILL NO.1	GENERAL: OFFICE ADMINISTRATION AND OVERHEADS/PRELIMINARIES				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
1.13	Provide, erect and maintain publicity signs as directed by the Engineer.	No	2.00		
1.14	Allow Provisional sum of KShs 5,000,000.00 for removal and alteration of services inclusive of liaison with the appropriate bodies in accordance with Specifications.	Prov. Sum	1.00	5,000,000.00	5,000,000.00
1.15	E.O. item 1.14 for the contractor's overheads and profit.	%	5,000,000.00		
1.16	Allow for attendance upon R.E staff including overtime in accordance with clause 137 of special specification.	PC Sum	1.00	54,000,000.00	54,000,000.00
1.17	Allow a Prime Cost (P.C) sum of KShs.10,000,000 for training of engineers, technicians and other support staff as maybe instructed by the Engineer.	PC Sum	1.00	10,000,000.00	10,000,000.00
1.18	E.O. item 1.17 for the contractor's overheads and profit.	%	10,000,000.00		
1.19	Allow provisional sum of 8,000,000 for Quality Control material testing by the Material Testing and Research Division (MTRD) and carrying out confirmatory geotechnical investigations and tests at the proposed locations of major structures as directed by the Engineer.	Prov. Sum	1.00	8,000,000.00	8,000,000.00
1.20	E.O. item 1.19 for contractor's overhead and profit.	%	8,000,000.00		
	Total Carried Forward to Summary:				

BILL NO.4	SITE CLEARANCE				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE(KSH)**	**AMOUNT (KSH)**
4.01	Clear site on road reserve and material sites including Light Bush Clearing	M^2	840,000.00		
4.02	Strip topsoil 200mm deep or as may be directed by the Engineer.	M^3	280,000.00		
4.03	Excavate, remove and dispose of concrete structures	M^3	2,600.00		
	Total Carried Forward to Summary:				

BILL NO.5	EARTHWORKS				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
5.01	Fill in soft material including benching of shoulders and embankment and compact to 100% MDD (AASHTO) in layers of 150mm as directed by the Engineer	M^3	582,400		
5.02	Fill in hard material and compact to 100% MDD (AASHTO) in layers of 150mm as directed by the Engineer	M^3	145,600		
5.03	Cut to spoil in soft material	M^3	58,240		
5.04	As item 5.03 but in hard materials.	M^3	5,824		
5.05	Provide improved sub grade material (CBR>14%) to a thickness of 300mm compaction to 100% MDD (AASHTO T99)	M^3	273,000		
	Total Carried Forward to Summary:				

BILL NO.7	EXCAVATION AND FILLING STRUCTURES				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
7.01	Excavate for structures in soft material, backfill with suitable material, spoil surplus/unsuitable material and keep the excavation free of water in compliance with cl. 702, 703, 704, 705, 706, 707 and 708 of the specifications.	M^3	348.00		
7.02	As item 7.01 but in hard material	M^3	105.00		
7.03	Provide, place and compact approved granular fill material on the structure as instructed by the Engineer	M^3	105.00		
7.04	Provide and place cement grouted stone pitching as directed by the Engineer	M^2	2,380.00		
7.07	Provide and fix gabion mesh for boxes and mattresses, including diaphragms	M^2	6,380.00		
7.08	Provide and place rock fill to gabion boxes	M^3	1,160.00		
7.09	Provide 1:3 cement mortar grouting to gabion faces as instructed by the Engineer	M^2	6,960.00		
	Total Carried Forward to Summary:				

BILL NO.8	CULVERTS AND DRAINAGE WORKS				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
8.01	Cleaning and desilting of existing culverts of all sizes and types, including removal and disposal of accumulated silt, debris, vegetation, and other foreign materials; flushing and clearing of inlet and outlet drains to ensure free flow of water; reinstatement of disturbed areas to the satisfaction of the Engineer; and disposal of all waste materials to approved spoil sites as directed by the Engineer.	MT	800.00		
8.02	Provide, lay and joint 600mm I.D precast concrete pipes culverts	MT	400.00		
8.03	As for item 8.03 but 900mm I.D	MT	735.00		
8.04	As for item 8.03 but 1200mm I.D	MT	1,845.00		
8.05	Provide and place class 15/20 concrete to beds	M^3	430		
8.07	Excavate for inlet, out fall, catch water drains, mitre and cut-off drains in soft material	M^3	15,000.00		
8.08	Excavation in soft material for pipe culverts, headwalls, wingwalls, apron, toe walls and drop inlets and compact as specified or as directed by the Engineer	M^3	3700		
8.09	Excavate, remove and dispose damaged pipe culverts including demolition of inlet and outlet structures.	M^3	500		
	Total Carried Forward to Summary:				

BILL NO.9	PASSAGE OF TRAFFIC				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
9.01	Construct and maintain, including watering 6.5m wide deviations having a 150mm thick gravel wearing course of CBR greater than 20% including road signs.	KM	70.00		
	Total Carried Forward to Summary:				

BILL NO:12	NATURAL MATERIAL BASE AND SUBBASE				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
12.01	Provide, transport, spread, and compact natural gravel for subbase as directed by the Engineer	M^3	128,625.00		
12.02	Provide, transport, spread, and compact natural gravel for base as directed by the Engineer	M^3	115,500.00		
	Total Carried Forward to Summary:				

BILL NO:14	CEMENT AND LIME TREATMENT BASE AND SUBBASE				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
14.01	Provide, transport to site and spread cement as stabilizing agent for the natural materials or GCS subbase and base material as specified and as directed by the Engineer.	TON	11,471.25		
14.02	Allow for mixing in cement and/or lime into natural gravel or GCS	M^3	244,125.00		
14.03	Curing and protection of treated layers	M^2	1,512,000.00		
	Total Carried Forward to Summary:				

BILL NO.15	BITUMINOUS SURFACE TREATMENT AND SURFACE DRESSING				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
15.01	Prepare surface of carriageway, junctions, accesses etc, provide and spray MC 30 cut-back bitumen as prime coat at a rate of 1.0-1.2 lt/m2 or as directed by the Engineer	L	735,000.00		
15.02	Prepare AC surface, provide and spray 80/100 penetration Grade bitumen as binder for single seal on Carriageway at a spray rate of 1.1-1.3 lts/m2 or as directed by the Engineer	L	882,000.00		
15.03	Provide, spread and roll 10/14 mm precoated chippings as single seal on Carriageway at a spread rate of 75 - 90 m2/m3 or as directed by the Engineer	M^3	8,750.00		
	Total Carried Forward to Summary:				

BILL NO.16	BITUMINOUS MIXES				
ITEM NO.	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
16.02	Provide, transport over any distance, lay and compact 50mm asphalt concrete on the main and access roads' carriageway and shoulders in accordance with the special specifications, drawings and as directed by the Engineer.	M^3	36,750.00		
16.03	Prepare prime surface on carriageway, provide and spray K1-60 bitumen emulsion as tack coat at a rate of 0.8-1.0 lt/m2 or as directed by the Engineer	L	661,500		
	Total Carried Forward to Summary:				

BILL NO.17	MAJOR CONCRETE WORKS				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
17.01	Provide place and compact concrete class 15/20 for blinding	M^3	150.00		
17.02	Provide place and compact concrete class 25/20 concrete	M^3	833.33		
17.03	Provide, place and compact concrete class 30(20) to foundation bases to piers, columns, wingwall and abutments, beams, deck slab	M^3	550.00		
17.04	Vertical framework class F2 finish	M^2	2,666.67		
17.05	Horizontal framework class F2 finish	M^2	2,066.67		
17.06	vertical framework class F1 finish	M^2	2,800.00		
17.07	Provide, cut, bend and fix into position high yield reinforcement bar of any diameter to BS4461 as instructed by the Engineer	TON	355.00		
	Total Carried Forward to Summary:				

BILL NO.20	ROAD FURNITURE REPAIR AND MAINTENANCE				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
20.01	Guard rail installation as directed by the Engineer	MT	1,200.00		
20.02	Provide and erect standard warning type signs 750mm size	No	100.00		
20.03	Provide and erect standard informatory signs 400 x 300 mm	No	80.00		
20.04	Paint 0.1 m wide yellow centerline on the road using hot applied internally reflectorised thermoplastic material	m^2	5,760.00		
20.05	As item 20.08 but 0.1 m wide white lines on the road edge	m^2	14,400.00		
20.06	Provide and erect edge marker posts as directed by the Engineer	No	582.00		
20.07	Provide and install retroreflective delineators (Cat's Eyes) as directed by the Engineer	No	1,141.00		
	Total Carried Forward to Summary:				

BILL NO.21	MISCELLANEOUS BRIDGE WORKS				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
21.01	Water proofing to structure-Providing and placing bitumen emulsion or cutback bitumen or bitumen/rubber Latex emulsion to all structura; concrete in contact with fill material or cut soil	M²	1,500.00		
21.02	Bridge Bearing-Providing and installing PSC freesynet maminated elastometric bearings or Provide and install elastomeric bearings LEB, IRHD size 500 X 450 X 100 mm or similar approved by the engineer.	NO	40.00		
21.03	Provide 1 m long Stainless steel rod of 25mm diameter for fixing the bridge	NO	80.00		
21.04	Movement joints and sealants-Providing and installing 25mm compression joint filler (Styrofoam) and sealant polystyrene or similar in areas of expansion joints	M²	60.00		
21.05	Pipe handrail and guardrail to Bridge;- Providing and erecting Handrail , Guardrail, posts and fitting as per clause 2108 (b) of standard specifications.	NO	800.00		
21.06	Weepholes-Providing and fix 75mm diameter UPVC Pipes to form weepholes in the structure, including for filter fabric at inlet		350.00		
21.07	Provide and Fix 75mm Dia drain pipe to deck slab	M	400.00		
	Total Carried Forward to Summary:				

BILL NO.25	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
25.01	Allow a Provisional Sum of Kshs. 1,000,000 for the planting of 100,000 trees in Construction Phase ESMP as directed by the Resident Engineer or as provided in the ESMP in the specifications See attached appendix 25.05	Prov. Sum	1.00	1,000,000.00	1,000,000.00
25.02	E.O. item 25.01 for contractor's overhead and profit Prevention Campaigns	%	1,000,000.00		
25.03	Allow a prime cost (P.C) sum of Kshs 5,000,000.00 for land acquisition as directed by the Engineer	PC Sum	1.00	5,000,000.00	5,000,000.00
25.04	E.O. item 25.03 for the contractor's overheads and profit.	%	5,000,000.00		
25.05	Allow a Prime Cost of Kshs.1,000,000.00 for Road safety sensitization and monitoring of Environment Mitigation measures as directed by Eng	Prov. Sum	1.00	1,000,000.00	1,000,000.00
25.06	E.O. item 25.03 for the contractor's overheads and profit.	%	1,000,000.00		
	Total Carried Forward to Summary:				

BILL NO.26	HIV/AIDS AWARENESS AND EDUCATION				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSHS)**	**AMOUNT (KSHS)**
26.01	Allow a Provisional Sum of 1,000,000 to Institute and provide an HIV/AIDS awareness, prevention campaign and training including presentation f monthly reports at site meeting in accordance with the specification to be approved by the R.E. for the entire duration of the contract	PC Sum	1.00	1,000,000	1,000,000.00
26.02	E.O. item 26.01 for contractor's overhead and profit Prevention Campaigns	%	1,000,000.00		
	Total Carried Forward to Summary:				

BILL NO.27	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES				
ITEM NO.	**DESCRIPTION**	**UNITS**	**QUANTITY**	**UNIT BID RATE (KSH)**	**AMOUNT (KSHS)**
27.01	Allow a Provisional Sum of KShs. 1,000,000.00 for instituting Road Safety Awareness and Accident Prevention Campaigns in the project zone and surrounding road projects	Prov. Sum	1.00	1,000,000	1,000,000.00
27.02	E.O. item 27.01 for contractor's overhead and profit Prevention Campaigns	%	1,000,000.00		
27.03	Allow for training of Road Safety Auditors (Engineers, Inspectors only) as will be directed by the Engineer.	PC Sum	1.00	1,000,000	1,000,000.00
27.04	E.O. item 27.03 for the contractor's overheads and profit.	%	1,000,000.00		
	Total Carried Forward to Summary:				

APPENDICES TO BILLS OF QUANTITIES					
Appendix To Bill Item 1.02: Furnish and maintain Engineers Representative office for the duration of contract					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
	1. ENGINEER'S MAIN OFFICE AND FURNITURE				
A102/1.00	Construct and maintain the RE'S office for the entire contract period, rate includes the building, security, water, electricity, gas, cleaning, tea and coffee in accordance with the specifications. Measurement and payments to be done in accordance with clause 141(b) of the standard Specs.	item	1.00		
A102/1.01	Executive desk 2.2x0.9 m with six lockup drawers	No	2.00		
A102/1.02	Desk 2.2x0.9 m with chair and three lockup drawers	No	6.00		
A102/1.03	Office tables	No	6.00		
A102/1.04	Executive Swivel orthopeadic chair adjustable height	No	4.00		
A102/1.05	Standard office chairs	No	16.00		
A102/1.06	Bench 3m long with cushioned backrest (located as directed)	No	2.00		
A102/1.07	Typist's desk	No	2.00		
A102/1.08	Typist's chair	No	5.00		
A102/1.09	Lockable steel stationery cupboard, 1.2 m^3, lockable	No	5.00		
A102/1.10	Medium size steel filing cabinet, 4 drawers lockable	No	5.00		
A102/1.11	Medium size steel filing cabinet, 2 lockable drawers lockable	No	5.00		
A102/1.12	Bookshelf, 1.5 m wide 3 shelves (for box files) sliding glass door	No	5.00		
A102/1.13	Conference table with 12 chairs	No	1.00		
A102/1.14	Table 0.8m^2 surface area for making tea	No	2.00		
A102/1.15	Dustbin	No.	12.00		
A102/1.16	Curtains for office and laboratory - for all windows and doors	Set	4.00		
A102/1.17	Ordinary 2 hole paper punch	No	12.00		
A102/1.18	Heavy duty 2 hole paper punch	No	4.00		
A102/1.19	A0 size drawing board on adjustable metal stand with parallel sliding	No	1.00		
A102/1.20	Tee square	No	1.00		
A102/1.21	250mm set square 45^o	No	4.00		
A102/1.22	250mm set square 60^o	No	4.00		
A102/1.23	Protractor 360^o	No	2.00		

APPENDICES TO BILLS OF QUANTITIES					
Appendix To Bill Item 1.02: Furnish and maintain Engineers Representative office for the duration of contract					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
A102/1.24	Digital planimeter, OTT30010 or simillar	No	2.00		
A102/1.25	Set of full divided scale (metric 1/1000, 1/2500, 1/500, 1/2000, 1/1250,	No	4.00		
A102/1.26	Set of drawing instruments, Kern or equivalent approved	No	4.00		
A102/1.27	Set of drawing pens, Radiograph or simillar approved	No	4.00		
A102/1.28	Complete set of stencils 0.2mm to 2mm	No	4.00		
A102/1.29	Computer meeting the following specifications or equivalent: Personal computer with 20" screen full multimedia, 320GB hard disk, 2.0GB RAM, Intel Core i8, complete with all accessories preloaded with latest versions of windows OS, MS Office, Professional	No	2.00		
A102/1.30	Autocad Civil 3D 2010 and Licences for above computers	No	1.00		
A102/1.31	As A102/1.29 with 20" screen	No	2.00		
A102/1.32	Laptop PC wiTH Intel Core i8 Processor 15.4" screen, 16GB DDR3 RAM 300GB 8xDVD+/-RW or simillar approved with Microsoft	No	3.00		
A102/1.33	Latest HP (A4) Laser Printer with accessories	No	1.00		
A102/1.34	Latest HP (A3) Laser Printer with accessories	No	1.00		
A102/1.35	UPS 600 VA	No	1.00		
A102/1.36	A3 Photocopier (approved make), with feeder sorting trays	No	1.00		
A102/1.37	Reams of A4 phocopying paper	No	300.00		
A102/1.38	Reams of A3 phocopying paper	No	120.00		
A102/1.39	Electronic scientific calculator, Casio fx 992s or equivalent approved	No	12.00		
A102/1.40	Stapling machine Ofrex size 50 or similar with 5000 staples	No	12.00		
A102/1.41	Heavy duty punch and spiral binder, IBICO AG or similar approved	No	4.00		
A102/1.42	Inkjet Plain Paper Fax Machine with 4MB of memory	No	2.00		
A102/1.43	Pencil sharpener (desk mounted type)	No	4.00		
A102/1.44	Heavy - duty 2 hole paper punch	No	2.00		

APPENDICES TO BILLS OF QUANTITIES					
Appendix To Bill Item 1.02: Furnish and maintain Engineers Representative office for the duration of contract					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
A102/1.45	Heavy - duty 2 hole paper punch	No	2.00		
A102/1.46	wall clocks, battery powered min size 350mm x 350mm	No	8.00		
A102/1.47	Ordinary 2 hole paper punch	No	16.00		
A102/1.48	First Aid Kit	No	8.00		
A102/1.49	Fire Extinguisher	No	8.00		
A102/1.50	Filing Tray - set of 3no.	set	20.00		
A102/1.51	Waste paper basket	No	24.00		
A102/1.52	Refrigerator minimum capacity 0.2 m^3	No	2.00		
A102/1.53	Drinking water dispenser, hot/cold	No	4.00		
A102/1.54	Table - 0.8 m^2 surface area	No	2.00		
A102/1.55	Cupboard, 0.15 m^3, lockable	No	2.00		
A102/1.56	Cooker 4 plate electric cooker with oven and grill	No	2.00		
A102/1.57	Digital Camera, 16.1 Megapixel(min), 1920x1080 full HD movie recording, optical steadyShot, sweep panorama, 2.7" LCD screen, minimum 5x digital zoom, multimedia card/SD 8GB memory, 12 scene	No	2.00		
A102/1.58	PABX Telephone system including intercom connecting all offices and laboratory. rate includes headsets, wiring and operational costs. including High Speed Internet Access using optic fibre or HDSL (High Data Digital Subscriber Line) broadband connection networked to all computers, with annual subscription paid during the entire contract period.	item	1.00		
	Total carried to Bill Item 1.02				

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
	1. FURNITURE				
1	Meeting table (3.0mx 1.2m) with 6 chairs	No.	1		
2	Ceiling fans	No.	4		
3	Air conditioner unit, 12000 BTU/hr	No.	2		
4	Desk 2.2m x 0.9m with 2 chest of drawers	No.	2		
5	Office chairs, standard	No	6		
6	Chairs with arms	No.	8		
7	Table (1.5mx .75m) with 2 drawers and 2 chairs.	No.	1		
8	4-drawer Steel lockable filing cabinet	No.	2		
9	Electronic scientific calculator, 12 figures	No.	4		
10	Fire extinguisher, 10 litre capacity, CO_2 type	No.	2		
11	Steel filing cabinet, 4 drawers, lockable	No	2		
12	Steel filing cabinet, 2 drawers, lockable	No	2		
13	Bookshelf, 3 shelves 1.2m long (to hold box files)	No	2		
14	First aid kit	No.	1		
15	Snake bite kit	No.	1		
16	Water filters	No.	2		
	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) Standards)				
	i). General Equipment				
17	Compaction mould complete with base plate and extension collar, 101.6mm dia.x116.43mm high	No.	4		
18	2.5kg Compaction rammer, drop regulated to 304.8mm	No.	4		
19	4.535kg compaction rammer, drop regulated to 457.2mm	No.	4		
20	Straight edge 300mm long, with handles	No.	6		
21	Electric vibrating Kango Hammer fitted with steel tamper (BS1377) with support frame	No	1		
22	Steel Tamper (BS 1377) compatible with Kango hammer	No.	4		
23	Compaction mould complete with base plate and extension collar, 152.4mm dia.x116.43mm high	No.	4		
24	Galvanized sample tray 1mx 0.5mx 75mm deep	No.	6		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
25	75mm brush	No.	10		
26	Semi-automatic Electronic balance , 25kg capacity accurate to 10g, including weights	No.	1		
27	20mm BS sieve, 300mm diameter	No.	2		
28	Stop Clock	No.	2		
29	Thermostatically controlled electric oven 104- 110ºC, capacity 0.225m3	No.	1		
30	As above but gas heated	No	0		
31	Moisture tin, 90mm diameter 20mm deep, cadmium plated or aluminium alloy	No.	50		
32	Cone penetrometer with gauge and automatically controlled test cup both BS Liquid limit and asphalt penetration	No.	1		
33	Test gauge	No.	1		
34	Penetration test cup	No.	2		
35	Penetration test cone	No.	3		
36	Glass comparator	No.	2		
37	Glass plate	No.	2		
38	Evaporating Dish 150mm diax45mm depth	No.	4		
	ii). Density (Sand Replacement method BS 1377)				
39	Metal container (450mm dia.)	No.	4		
40	Stainless steel tray, 305mm diameter 50mm deep	No.	4		
41	Metal tray with 150mm diameter hole in the centre, 300mm x 300mm square or equivalent area, 400mm deep	No.	3		
42	Metal tray with 200mm diameter hole in the centre, 500mm x 500mm square, 50mm deep	No.	3		
43	Steel pegs for fixing tray in position	No.	40		
44	Sand pouring cylinder, 150mm diameter	No.	5		
45	Sand pouring cylinder, 215mm diameter	No.	5		
46	Cold steel chisel 20mm x 300mm long	No.	6		
47	Cold steel chisel 10mm x 250mm long	No.	6		
48	2 No. 1.5kg, 2no. 3.5kg mason hammers and 2No. 1kg rubber mallet	Set	3		
49	Scoop for removing excavated material from hole, 250mm long handle	No.	10		
50	100mm brush, soft	No.	4		
51	50mm brush, soft	No.	6		
52	Primus gas stove	No.	3		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
53	Calibration can 150mm diameter x 150mm deep	No.	4		
54	Ditto but 200mm diameter x 250mm deep	No.	4		
	iv). CBR (AASHTO T193)				
55	50 kN CBR Load frame complete with stabilising bar (electric and hand operated)	No.	1		
56	CBR penetration piston including bracket	No.	2		
57	Penetration gauge range 0-25mm travel x 0.01 mm divisions	No.	2		
58	Proving ring for above of 50 kN capacity	No.	2		
59	Proving ring for above of 28 kN capacity	No.	1		
60	Proving ring for above of 10 kN capacity	No.	1		
61	CBR mould, 152.4mm dia. X 178mm high, complete with perforated base plate and extension collar 50.8mm high that can be fitted to either end of the mould	No.	24		
62	Perforated swell plate 150mm dia. With an adjustable centre post of rustproof metal provided with a lock nut	No.	24		
63	Swell tripod	No.	50		
64	Swell dial gauge	No.	50		
65	2.27kg slotted surcharge weight	No.	50		
66	2.27kg annular surcharge weight	No.	50		
67	2.8 kg solid base plate for CBR mould	No.	4		
68	Central extruder, complete with 29KN hydraulic jack and accessories.	No.	1		
69	Spacer disc with “T” handle	No.	4		
70	Soaking tank for CBR mould sufficient to hold at least 100 moulds	No.	1		
	v). Specific Gravity for Aggregates (BS 812)				
71	200mm dia. Wire mesh basket with apertures not greater than 6.5mm large enough to contain 2.5kg of aggregates	No.	1		
72	A stout watertight container in which the basket can be freely suspended	No.	1		
73	Soft absorbent cloth (tea towel)	No.	20		
74	Shallow tray of area not less than 0.065m2	No.	4		
75	An airtight container of similar capacity to the basket	No.	2		
76	Pycnometer of 1 litre capacity	No.	4		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
77	Electronic automatic 5kg 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		
78	Well ventilated oven, thermostatically controlled to maintain a temperature of 105ºC+-5ºC	No.	1		
	vi). Sieve Analysis				
79	Sieve 300mm diameter : 75, 63, 50, 37.5, 28, 25,19, 20, 14,12.5, 10,9.5, 6.3, 5, 4.75 and 4mm, plus lid and receiver	Set	3		
80	Sieve 200mm diameter: 2.36, 2, 1.18, 1, 0.6, 0.5, 0.425, 0.300, 0.150 and 0.075mm plus lid and receiver	Set	3		
81	Electric Sieve shaker	No.	1		
82	1.2m x 1.2m x 50mm deep galvanized metal tray	No.	10		
83	Riffle box with 50mm slots	No.	2		
	vii). Concrete: Slump and Cube Manufacture (BS 1881)				
84	Slump cone, tamping rod and base	Set	3		
85	Steel rule	No.	2		
86	Concrete cube mould 150mm cube	No.	20		
87	Large curing tank (capacity 50 No. Cubes)	No.	1		
88	Cube tamping rod and spanner for item	No.	3		
	viii). Concrete: Cube Compression Testing				
89	Concrete compression machine, to BS 1610 Grade A with 300mm gauge, rectangular platens, capacity 1560 kN with load pacer together with 100kN flexural flame with accessories	No.	1		
90	Set of safety guards	No.	1		
91	20mm distance piece	No.	1		
92	50mm distance piece	No.	1		
93	80mm distance piece	No.	1		
94	100mm distance piece	No.	1		
95	Assembly for beam tests	No.	1		
96	Electro-mechanical load pacer, 100mm or equivalent distance piece	No.	1		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
	ix). Aggregate and Chippings				
97	Sand equivalent equipment to AASHTO T176 including a graduated plastic measuring cylinder, rubber stopper, irrigator tube weighed foot assembly, siphon assembly, 85ml tinned box(57mm dia), wide mouth funnel(100mm dia.), stop clock, mechanical shaker and 10 litre jar	Set	1		
98	Standard aggregate crushing value apparatus, supplied complete with cylinder, plunger, base plate, tamping rod and measure.	Set	3		
99	Aggregate Impact testing machine to determine the aggregate impact value (AIV)	No.	1		
100	Sodium sulphate test apparatus	No.	10		
101	Beaker 250ml	No.	2		
102	Reagent grade silica gel, 500g container	No.	100		
103	Tamping rod 8mm dia. X 300mm long and metal measure 115mm dia. X 180mm deep for above (BS 812)	No.	1		
104	Flakiness gauge (BS 812) passing 10.0mm retain 6.3mm	No.	1		
105	Flakiness gauge (BS 812) passing 14.0mm retain 10.0mm	No.	1		
106	Flakiness gauge (BS 812) passing 20.0mm retain 14.0mm	No.	1		
107	Flakiness gauge (BS 812) passing 28.0mm retain 20.0mm	No.	1		
108	Flakiness gauge (BS 812) passing 37.5mm retain 28.0mm	No.	1		
109	Flakiness gauge (BS 812) passing 50.0mm retain 37.5mm	No.	1		
110	Flakiness gauge (BS 812) passing 63.0mm retain 50.0mm	No.	1		
	x). Tray Spray and Spread Rate Tests				
111	Transverse distribution test of bitumen spray (depot tray test to BS 1707) equipment	No.	1		
112	Rate of spread of coated chippings Tray and chains	No.	4		
113	Calibrated spring balance	No.	4		
114	Steel tray 306x306x38mm(for measuring bitumen spray rate)	No.	10		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
115	Gunny sacks	No.	200		
116	Plastic bag 900 x 450mm x 1000 gauge	No.	1000		
117	Plastic bag 450 x 300mm x 1000 gauge	No.	1000		
118	Filter paper 150mm dia. Whatman No. 5 (Boxes of 100)	No.	40		
119	Filter paper 400mm dia. Whatman No. 5 (Boxes of 100)	No.	20		
120	Filter paper 100mm dia. Whatman No. 5 (Boxes of 100)	No.	20		
121	Cotton Waste (or drying cloth)	KG	20		
122	Filter paper 400mm dia. Whatman No. 54 (Boxes of 100)	No.	10		
	xi). Miscellaneous				
123	Gas cylinders 13kg	No.	5		
124	Padlocks	No.	6		
125	Plastic jerry cans 20 litre capacity	No.	6		
126	Paper punch	No.	2		
127	Stapler with pins	No.	2		
128	Tray lifting callipers	No.	4		
129	Laboratory dust coats-Brown	No.	16		
130	Laboratory dust coats-White	No.	6		
131	Asbestos gloves	No.	16		
132	Laboratory gumboots(assorted sizes)	No.	16		
133	Wheel barrow	No.	4		
134	Dust pan plus brush	No.	4		
135	Hand shovel	No.	6		
136	Pick axe with handle	No.	6		
137	Metal scoop, large (120x190x70mm) cast aluminium handle	No.	4		
138	Metal scoop, large (70x110x40mm) cast aluminium handle	No.	6		
139	Garden trowel	No.	4		
140	Sample tray 306x306x38mm	No.	20		
141	Spatula 200mm blade	No.	6		
142	Spatula 100mm blade	No.	6		
143	BS sieve 450mm dia, 37.5mm	No.	1		
144	BS sieve 450mm dia, 20mm	No.	1		
145	BS sieve 450mm dia, 5mm	No.	1		
146	BS sieve 450mm dia, 0.425mm	No.	2		
147	BS sieve 450mm dia, 0.3mm	No.	2		
148	BS sieve 450mm dia, 0.75mm	No.	2		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
149	Set of lid and receiver for item 212 to item 217	No.	1		
150	BS sieve brush double ended brass and nylon bristle	No.	4		
151	Measuring cylinders plastic with sprout 100ml, 250ml, 500ml capacity.	set	3		
152	Glass jar capacity 5 litres with lid	No.	10		
153	200mmx200mmx20mm cadmium plated or aluminium tin	No.	50		
154	Electronic Automatic balance, capacity 1000g accurate to 0.01g	No.	1		
155	Electronic Automatic balance, capacity 2100g accurate to 0.01g	No.	1		
156	Electronic Automatic balance, capacity 20kg accurate to 0.01g	No.	1		
157	Dial -0-gram balance 310g capacity accuracy to 0.1g	No.	1		
158	Field and laboratory scale with scoop 10000g capacity accurate to 1.0g	No.	1		
159	Distilled water still	No.	1		
160	Polythene or glass 20 litre storage vessels with tap at bottom	No.	2		
161	Set of stiff broom and soft broom with handles	No.	5		
162	Vernier callipers, 150mm, accurate to 0.1mm	No.	1		
163	As above but 200mm, accurate to 0.002mm	No.	1		
164	Pestle and mortar	No.	2		
165	Linear shrinkage mould (BS 1377)	No.	15		
166	Average least dimension gauge	No.	2		
167	Lockable tool box containing: 1pair "Molegrip" 2x150mm screw driver, 2x200mm screw driver, 2x300mm screw driver, (1 std and 1 'Phillips' star head of each), adjustable spanners 200mm and 300mm, 1 pr Round-nosed pliers, 1 pair general purpose pliers	No.	1		
168	Plastic or metal bucket including lid, 10 litres capacity	No.	10		
169	Polythene wash bottle	No.	6		
170	A4 size clipboard	No.	10		
171	Mercury thermometer, range-1de.cent. To 15deg.cent glass (BS 593)	No.	4		
172	Minimum and maximum thermometer(BS 692)	No.	2		
173	Rain gauge	No.	4		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
174	Portable dial thermometer +50oC to +2500C accurate to ±3% with 0.65 long stem	No.	3		
175	As above but with 1ml long stem	No.	2		
176	5 litre capacity steel storage container with leak and dustproof lids for storage of bitumen samples	No.	100		
177	Hotplate 200mm dia. With simmerstat heat control unit	No.	2		
178	450mm diameter x 150mm deep metallic karais	No.	20		
179	MOT straight edge with accessories	No.	1		
180	Metric wedge	No.	1		
181	Transit case	No.	1		
	xii). Standard Specification *(Copies of each of the latest editions of the following Standards)*				
182	KS 1725	No.	1		
183	BS 812, Testing aggregates	No.	1		
184	BS 882:1992, Specification for aggregates from natural sources for concrete (AMD 13579) (No longer current but cited in Building Regulations)	No.	1		
185	BS 1377: 1990, Methods of testing soils for Civil engineering purposes	No.	1		
186	BS 1881: Methods of testing concrete	No.	1		
187	BS 434-2:2006, Bitumen road emulsions. Code of practice for use of cationic bitumen emulsions on roads and other paved areas	No.	1		
188	BS EN 1008:2002, Mixing water for concrete	No.	1		
189	BS 4449:2005, Steel for the reinforcement of concrete - Weldable reinforcing steel - Bar, coil and decoiled product - Specification (+A2:2009)	No.	1		
190	BS 8666:2005, Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete - Specification (incorporating Amendment No.1)	No.	1		
191	BS 5911-200:1994: Precast concrete pipes and ancillary concrete products. Unreinforced and reinforced manholes and soakaways of circular cross section (AMD 11031) (AMD 13205) (No longer current but cited in Building Regulations)	No.	1		
192	BS 8004: Code of practice for foundations	No.	1		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
193	Standard Specifications for Transportation Material and Methods of Sampling and Testing (AASHTO) Parts I and II, 14th Edition	No.	1		
194	Asphalt Institute Standards: MS-2, Mix design methods for asphalt concrete and other hot-mix types		1		
	xiii). Marshall Test (ASTM D1559)				
195	Petrol driven 100mm dia core cutter with all accessories	No.	1		
196	Specimen mould + base plate + extension collar	No.	10		
197	Specimen extractor	No.	2		
198	Compaction hammer	No.	2		
199	Compaction pedestal + specimen mould holder	No.	2		
200	Breaking head mould	No.	1		
201	Electrical 30 kN Marshall compression testing machine	No.	1		
202	Suitable electrically operated laboratory mixer, 10 litre capacity	No.	1		
203	Proving ring 28kN capacity graduated in 0.0025mm	No.	1		
204	Flow-meter	No.	2		
205	Suitable mechanical mixer	No.	0		
206	Water bath at least 150mm deep thermostatically controlled to maintain water at 60ºC ± 1ºC with a perforated false bottom or equipped with a shelf to support specimen 50mm above the bottom of the bath, with cover	No.	1		
207	Thermometer (50ºC to 25ºC) 50mm dia with 180mm stainless steel stem	No.	2		
208	Bench mounted mixer, 5 litre capacity with isomantle electric heater	No.	2		
	xiv). Bitumen Extraction Test				
	(a) Cold extraction Bottle Roller Method, BS 598:102				
209	Electronic top pan balance 4kg capacity	No.	1		
210	Flat bottomed scoop	No.	3		
211	Steel garden trowel	No.	2		
212	Large steel spoon	No.	2		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
213	Heat resistant gloves	pair	10		
214	Foot pump for pressurizing air –water assemblies upto a maximum of 700kN/m2 and fitted with flexible hose approximately 1.2m long and connector	No.	2		
215	Steel bottle 600ml capacity with 50mm dia rubber stopper	No.	2		
216	Steel bottle 2500ml capacity with 70mm dia rubber stopper	No.	2		
217	Steel bottle 7000ml capacity with 70mm dia rubber stopper	No.	2		
218	Flask funnel for fitting to the 700ml steel bottle with the rim of the funnel retaining sieve 200mm nominal diameter	No.	1		
219	Bottle roller compact bench mounted unit designed to rotate two bottles simultaneously about the longitudinal axis	No.	1		
220	Pressure filter complete with cutting tool for making a hole in the filter paper	No.	1		
221	Filter funnel to take 200mm nominal diameter sieves	No.	2		
222	Continuous flow centrifuge	No.	1		
223	Binder recovery apparatus	No.	1		
224	Volumetric flask 250ml, 500ml, 100ml and 2000ml capacity each	No.	2		
225	Recovery still for Dichloromethane	No.	1		
226	Hot extractor complete with steel pot with gasket and gauze container, dean and stark receiver, Liebig condenser and a box of filter paper – Whatman No. 5x400mm dia or equivalent	No.	2		
	(b) Hot Extraction Method, BS 598				
	COMPACTORS				
	BS EN 12697-32				
227	Percentage Refusal Density (PRD) Vibrating hammer compactor complete with shanks, tampers (small and large), 6 split moulds, 7 base plates from ELE or equivalent	No.	1		
	xv). Consumables				
228	Paraffin wax	kg	50		
229	Gas	kg	500		

Appendix to Bill Item No. 1.04: Provide laboratory equipment and reagents for use by the Engineer's representative for the entire duration of the contract as per the attached appendix to this item.					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
237	Filter paper 270mm dia., 33mm with dia. Hole in centre, Whatman No 5 (Box of 100)	No.	15		
238	Trichloroethylene	kg	500		
239	Dichloromethane	kg	250		
240	Cotton waste	kg	200		
241	Gas cylinders compatible with supplied stoves	No.	15		
	TOTAL CARRIED TO BILL ITEM 1.05				

APPENDIX TO BILL ITEM 1.05 ALLOW PRIME COST (P.C.) SUM FOR SURVEY WORKS					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
A106/1.01	Engineer's Electronic Level Wild, - Wild NA 2 or equivalent automatic precise with a compensator and more than 30x magnification	No	2.00		
A106/1.02	A0 size drawing board on adjustable metallic stand with parallel sliding	No	1.00		
A106/1.03	Survey umbrella with tiltable upper section of the road	No	3.00		
A106/1.04	Levelling staff 3m with levelling bubble (Wild GNLE or similar	No	6.00		
A106/1.05	3m ranging rod metallic	No	18.00		
A106/1.06	1m stainless steel straight-edge	No	6.00		
A106/1.07	3m stainless aluminium straight-edge	No	3.00		
A106/1.08	30m steel white face tape	No	6.00		
A106/1.09	100m steel band tape	No	3.00		
A106/1.10	2kg Hammer	No	9.00		
A106/1.11	Circular and arrow templates	No	3.00		
A106/1.12	Pangas (16") straight type	No	12.00		
A106/1.13	Levelling stave telescopic type 4m length with levelling bubble with 12 levelling plates	No	12.00		
A106/1.14	Total Station - Leica TPS1200 + series with Automatic target recognition, EGL guide light, remote control, motorised, PowerSearch (PS) and GUS74 laser guide or equivalent complete with 32GB memory card facility plus downloading software Leica geo office system, three measuring poles with double prisms each per total station.	No	2.00		

APPENDIX TO BILL ITEM 1.05 ALLOW PRIME COST (P.C.) SUM FOR SURVEY WORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
A106/1.15	5m tape measure	No	12.00		
A106/1.16	Graph paper A3 size 50sheets booklet	No	450.00		
A106/1.17	Drawing office stools	No	5.00		
A106/1.18	30m linen tape measure	No	6.00		
A106/1.19	Roll of tracing paper	No	30.00		
A106/1.20	GPS System - Leica GS09 GNSS system, with at least three rovers and a controller. the contoller to have colour display, touch screen & stylus, CF card slot and alphanumeric keyboard, GLONASS, RTCM/CMR, RTK unlimited, network RTK, 5Hz positioning, and raw data loging. the system to incorporate Refrence line, DTM stake out, Road Runner and Volume calculation. the system to include all acceossories i.e batteries with professional charger, Min 8GB memory card, compact Flash PC card adaptor, data transfer cables, modems and antennas, poles and accessories, tripod and software. the equipmet to be delivered to the General Manager (Design & Construction) at the start of the project.	set	1.00		
Total carried to Bill Item 1.04					

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 shall take precedence

101 LOCATION OF THE PROJECT

The Upgrading of Imaroro – Mashuru – Isara Road – Phase I is located within Kajiado County in the Southern Region of the Republic of Kenya. The project road serves as a vital arterial corridor within the county, enhancing connectivity between the Namanga Highway (A104) and the interior sub-counties, while supporting regional transit and socio-economic integration.

The project road links the main international transport corridor along the Nairobi – Namanga National Trunk Road (A104), traversing eastward through the administrative and commercial hub of Mashuru, and terminating towards Isara.

The project commences at the junction with the A104 Highway heading towards Imaroro and extends towards Isara. The total length of the road section under Phase I is approximately 70km.

The alignment generally follows the existing earth and gravel road corridor with minimal deviations, passing through predominantly rural, pastoral and peri-urban settlements characterized by agricultural and livestock-based land use, local trading centers and expanding market hubs.

The road corridor serves mixed traffic conditions, accommodating both local vehicular traffic (short-distance domestic trips) and heavy commercial commercial vehicles transporting agricultural produce, livestock and construction materials.

The Imaroro – Mashuru – Isara axis is of significant county and national economic importance due to its role in opening up the Kajiado interior, facilitating access to administrative head offices, schools, health centers and markets across the region. Currently, the existing earth/gravel standard limits accessibility, particularly during wet seasons, resulting in high vehicle operating costs and travel delays.

The upgrading of the Imaroro – Mashuru – Isara Road – Phase I to Bitumen Standard is therefore intended to enhance road capacity, improve geometric alignment, eliminate seasonal transit interruptions and accommodate future traffic growth. The project will significantly improve the level of service and operational efficiency of the corridor, thereby supporting regional trade, socio-economic development, and public service delivery in line with national infrastructure objectives.

102 SCOPE OF WORKS

The Works to be executed under this Contract for the Upgrading of Imaroro – Mashuru – Isara Road – Phase I comprise the upgrading of the existing earth/gravel road to Bitumen Standard along the designated alignment. The standard cross-section for the upgraded road shall constitute a 7.0m wide carriageway and 1.5m wide shoulders on each side.

The Phase I project has an approximate length of 70km, and the site of the Works shall be within the existing road reserve and any other areas as may be designated in the Contract or instructed by the Engineer.

The Works shall include, but not be limited to, the following: -

1. Provision of Resident Engineer's Offices and Laboratory

2. Construction and Maintenance of deviation roads, improvement and maintenance of the existing road, and provision of traffic through the works.

3. Earthworks:

    i) Where expansive clays/black cotton soil, cut to spoil to 1m below formation level, OR to suitable material level, whichever comes first and backfill or fill to 300mm below formation level with material of minimum CBR of 10% and a swell of less than 1% (measured after 4 day soak) and compact to 95% MDD (AASHTO T99).
    ii) Compaction to 100% AASHTO T99 Density at OMC of top 300 mm of original ground in both cuts and fills and where the native subgrade meets criteria (i) above.
    iii) Construction of improved subgrade layers, where required of at least 300mm thickness, using at least S4 quality borrowed materials (Min. CBR of 14%) to achieve a uniform design subgrade class S3 throughout the project road. The improved Subgrade shall be compacted in layers of maximum thickness 150 mm to specifications.
4. Pavement construction as follows:
    i) Construction of 175 mm thick cement and/or lime improved gravel sub base layer to carriageway and shoulders (Plant Mixed and Paver Laid, Type of cement is CEM II, 42.5N).
    ii) Construction of 150 mm thick cement and/or lime improved gravel base to carriageway and shoulders (Plant Mixed and Paver Laid, Type of cement is CEM II, 42.5N).
    iii) Prime with MC30 cutback bitumen.
    iv) Use K1-60 for tack coat.
    v) Lay 50mm Asphalt Concrete binder course on carriageway and shoulders.
    vi) Apply 80/100 binder
    vii) Apply a single seal surface dressing of pre coated 10/14mm chippings as wearing course to carriageway and shoulders.
    viii) The road carriageway shall be 7.0 m wide with shoulders of 1.5m width both sides.

ix) The side ditch shall be trapezoidal with invert level being at least 0.6m below the road formation level
x) Application of Asphalt Concrete to bus bays, junctions, accesses as directed by the Engineer.

5. Drainage and protection works as follows:
   i) Remove existing inadequate and defective cross and access culverts, inlets and outlets structures and replace as directed by the Engineer.
   ii) Construction of box culverts, pipe culverts, headwalls, wingwalls and aprons to culverts.
   iii) Construction of side and mitre drains to the whole road including improvement of other drainage and soil erosion protection works.
   iv) Carry out protection works (scour checks, stone pitching) as directed by the Engineer.
   v) Carry out any miscellaneous works that are not included above but may be deemed necessary by the Engineer for the execution and completion of the works.
6. Road furniture
   i) Provide and erect all the road signs and markings as directed by the Engineer.
   ii) Provide, lay and joint raised kerbs, precast concrete channels and invert block drains as directed by the Engineer.
   iii) Plant selected grass on slopes of embankments and cuttings.
   iv) Provide and fix flex beam guardrail to bridge approaches and vehicle/pedestrian guardrail at bridges as directed by the Engineer.
   v) Provide and fix in position approved drain pipes on bridge deck, abutments, wing walls and retaining walls.
7. Concrete works
   i) Provide and place Class 15/20 concrete, 50 mm thick, as blinding to foundations of structures including culverts, headwalls, wing walls, aprons, toe walls, and other minor drainage works, in accordance with the Specifications and as directed by the Engineer.
   ii) Provide and place Class 25/20 concrete for culvert headwalls, wing walls, aprons, toe walls, inlets and outlets, including formwork and proper curing, in accordance with the approved drawings, Specifications, and as directed by the Engineer.
   iii) Provide and place Class 30 concrete for box, bridge structures

8. Other ancillary works
   i) Construction of guardrail barriers as directed by the Engineer
   ii) Improvement of major junctions as directed by the Engineer
9. Maintenance of passage of traffic through the works
10. Any other activity not listed above but may be deemed necessary and instructed by the Engineer.
11. Maintenance of the works during the construction period. The defects notification period shall be 24 months.

The Works detailed above are only indicative of the Scope of Works associated with this contract and the Engineer may, where necessary, substitute some of the Works with others within the project area without substantially altering the overall Scope of the Works. Work shall be measured and paid using the relevant rates and prices in the Bill of Quantities.

103 CONTRACT DRAWINGS

Contract drawings have been bound in a book of drawings accompanying these Contract Documents as a separate volume. Additional copies of these drawings that may be required by the Contractor can be obtained from the Engineer, in which case the Contractor will be required to reimburse the cost of producing such additional copies

The Engineer may from time to time, in order to enable the satisfactory completion of the works, revise, amend or supersede any of these drawings. It shall be the Contractor's responsibility to construct all works in conformity with the latest revision, amendment or superseding drawings, provided that the Engineer has given to the Contractor in writing such reasonable prior notices of intention to revise, amend or supersede as the nature of the intended change requires, and the relevant drawings have been issued to the Contractor.

The changed drawings shall entitle the Contractor such reasonable additional payments as provided for in the Contract, including any abortive work carried out by the Contractor prior to notice of intent to undertake changes having been given. The Contractor may be required to demolish, alter and/or correctly rebuild at his own expense any part of the Works not in conformity with the current drawings issued to him within a reasonable prior notice.

Three types of drawings shall be distinguished: Contract drawings; Shop or Erection drawings and As-Constructed drawings as described here under:

Documents

The following manuals that are important and relevant to the contract, will not be issued with the tender documents but will be available for inspection during normal working hours at the offices of the Director (Highway Planning and Design), Kenya National Highways Authority, P.O. Box 49712 - 0100, Nairobi, Kenya.

Road Design Manual:

Part 1: Geometric Design of Rural Roads

Part 3: Materials and Pavement Design for New Roads

Manual for Traffic Signs:

Part 1: Road Markings

Part 2: Traffic Signs

104 PROGRAMME OF EXECUTION OF THE WORKS

The contractor shall provide the works programme, required under clause 8.3 of the Conditions of Contract, within the date stipulated in the Appendix to Form of Bid.

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.

The Contractor shall allow in his programme for construction of trial sections and carrying out tests upon them as directed by the Engineer in accordance with the provisions of Clause 129 of the Standard Specification. The time for completion of the Contract shall not be extended because of the time taken to carry out tests and evaluate trial sections.

Add the following

"The above program shall be prepared using a cloud-based Critical Path Method (CPM) scheduling tool. The Contractor shall coordinate with a certified trainer of the tool to build the necessary capacity for the Employer's staff immediately after commencement or at a time deemed appropriate by the Engineer. This training will focus on advanced planning and scheduling using the tool and will take place at a designated location as directed by the Engineer.

The program shall be submitted in both hard copy and electronic format through the scheduling tool."

105 ORDERS 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 complete work is achieved.

107 TAKING OVER CERTIFICATE

The minimum length of the road for which a certificate will be issued is 50% of the entire length of a road segment of the project road when substantially completed, as indicated in the Appendix to form of tender.

109 NOTICES OF OPERATIONS

Add the following sub- Clause.

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, storage and transporting of all explosives, ancillary materials and all other items of related kind whatsoever required for blasting.

111 NATIONAL SPECIFICATIONS

Add the following at the end of this clause

"The Contractor shall provide all such specifications not more than 60 days after commencement of contract and at least 14 days before the execution of work to which the specification is applicable."

117 HEALTH, SAFETY AND ACCIDENTS

Add the following:

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 HIV 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.

121 DIVERSION OF SERVICES

(a) The Contractor shall acquaint himself with the location of all existing services such as telephone lines, electricity cables, water pipes, sewers etc., before execution of any works that may affect the services. The cost of determining the location of the existing services together with making good or repairing of any damage caused all to the satisfaction of the Engineer shall be included in the BID rates.

(b) Subject to the agreement with the Engineer, the Contractor shall be responsible for removal of alteration and relocation of existing services.

(c) The Contractor shall indemnify the Employer against claims originating from damage to existing services or works.

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 CAMPS SITES AND FOR THE CONTRACTOR'S OWN PURPOSES, INCLUDING TEMPORARY WORKS.

Notwithstanding Clause 124 of the Standard Specification all requirements of land for temporary works and construction purposes shall be to the approval of the Engineer but the Contractor will make all necessary arrangements with the property

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

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.

125 WATER SUPPLY

Add the following sub-clauses:

The proposed water sources for construction are:

(a) Boreholes. The quality of water from boreholes along the project road was investigated and found to be suitable for road construction. If instructed by the Engineer, the Contractor shall make arrangements for sinking of the boreholes for use by the contractor and the community. These arrangements shall include but not limited to carrying out hydro geological investigations, sinking the boreholes, construction of supply tanks and all associated works and operation of the boreholes for the period or part of the contract period. The boreholes shall be handed over to the Employer at the completion of the contract

(b) Water pans constructed at the edge of the road reserve placed appropriately to collect surface runoff during rains at locations proposed by the Contractor and approved by the Engineer to supplement borehole water. These water pans shall be made safe by fencing. A committee of six responsible for developing water sharing guidelines between the local community and the Contractor shall be formed at the onset of the construction works comprising, the Site Agent, the Resident Engineer, Social Expert (from Consultant), 2no. Village Elders and the local Assistant Chief.

127 INFORMATION FROM EXPLORATORY BORINGS AND TEST PITS

Omit the content of Clause 127 and substitute the following Sub-Clauses: -

127.1 Factual Materials Report

The Factual Materials Report for this Contract does not form part of the Contract Documents. However, the Report will be made available for the Contractor's information only, and any conclusions on issues such as suitability of materials, location of borrow pits, material quantities etc., made by the Contractor on basis of the Factual Materials Report, will be at his own risk.

127.2 Trial Sections

The Contractor shall allow in his programme for constructing trial sections and carrying out tests upon them as directed by the Engineer. Trials would normally be required at the start of each pavement layer and if changes of materials, method or equipment deem it necessary as directed by the Engineer.

The time for completion of the Contract shall not be extended because of the time needed to construct trial sections and evaluate the tests on them.

At least fourteen days before the work of laying any pavement layer is commenced, the contractor shall construct trial sections of at least 100 m in length and to the full construction width and the specified pavement layer thickness. For each trial section, the Contractor shall use the materials, mix proportions, mixing, laying, compaction plants and construction procedure that he proposes to use for the main work. The main work of laying the pavement layer shall not be commenced until this trial has been tested and approved by the Engineer.

No variation in the construction procedure, mix proportions, size, grading or source of any of the constituents shall be made without the agreement of the Engineer who may first require new trial sections to be carried out.

Trial sections, if found satisfactory, will be paid for under the rates in the Bill of Quantities for the appropriate items, as if the trial sections were part of the normal work. No separate payment will be made for trial sections and testing and the Contractor shall be deemed to have provided for this in his rates.

The Contractor shall make good, at his own expense, any trial sections that fail to meet the specified standards. The standards shall include, but not be limited to, material quality, layer thickness, levels and compaction.

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.

130 PROGRESS PHOTOGRAPHS AND PROJECT DOCUMENTATION

Notwithstanding the provision of Clause 130 of the Standard Specifications, the Contractor shall not be responsible for taking of progress photographs. Progress Photographs shall be taken by the Engineer's Representative and relevant costs charged to the Contractor who will be reimbursed under Miscellaneous Accounts.

The Engineer's Representative shall organize and undertake project documentation through videography and prepare a video documentary of the project before construction, during and after.

131 SIGNBOARDS

The Contractor shall provide and erect **four (4)** publicity signboards on each of the road links as directed by the Engineer. The Engineer shall, as shown in the Drawings, direct the minimum dimensions of the boards. The signs shall be printed reflective Vinyl Stickers on galvanised steel plates min 350mm high. Posts shall be galvanised steel. Main headings lettering shall be Yellow and min 80mm high, while subheadings lettering shall be White and min 60mm high as per the drawings.

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

132.1 HOUSING ACCOMMODATION FOR ENGINEER'S STAFF

The Contractor shall provide and maintain furnished houses as indicated in the drawing or as approved by the Engineer.

132.2 LIST OF FURNITURE FOR ENGINEER'S STAFF HOUSES

Each house shall be provided with new furniture, equipment and fittings to the approval of the Engineer as listed below respectively:

All the houses and furniture mentioned above shall revert to the Employer after the completion of the contract.

Payments shall be made under the relevant provisions in the Bills of Quantities.

Item Description	Quantity per House Type				
	Type I	Type II	Type III	Type IV	Type V
Double Bed (5x6) with "Slumberland" Mattress	3	3	2	0	0
Single Bed (3 ½ x 6) with "Slumberland" Mattress	0	0	0	1	1
Dressing table with mirror and stool	0	0	0	0	0
Chest of 5No. drawers with mirror	3	2	1	0	0
Wardrobe (movable)	3	2	2	1	1
Resident table	3	2	1	1	0
Bedroom chair	2	1	0	0	0
600mm x 450mm high medicine cabinet with mirror	2	1	1	1	1
Bathroom stool	0	0	0	0	0
Towel Rail	2	1	1	1	1
Dining Table (2m x 1m approx.)	1	1	1	1	1

Item Description	Quantity per House Type				
	Type I	Type II	Type III	Type IV	Type V
Dining Chairs	6	4	4	0	0
Side Board	2	1	1	0	0
3-piece lounge chairs	2	1	1	1	1
Armchair with cushions	2	2	2	0	0
Coffee table 40 x 45cm high	2	1	1	1	1
Occasional tables, 70x70x45 cm high	1	1	1	0	0
Book case (2m long with 3 shelves)	1	1	1	1	1
Writing Desk with chair	1	1	1	1	1
Kitchen shelves (per sq. m)	1	1	1	1	1
Kitchen table (2m x 0.8m approx.)	3	2	2	1	1
Kitchen chair	3	3	3	1	1
Refrigerator (at least 19 cu.ft.) including a freeze	1	0	0	0	0
Compartment of about 3 cu.ft. capacity					
Refrigerator (at least 7 cu.ft) including a freezer compartment	0	1	1	1	1
Cold water storage tank of at least 400 L capacity	1	1	1	1	1
Water filter at least 15 L capacity	1	1	1	1	1
Table lamps	3	2	2	1	0
Electric fan	1	1	1	1	1
Gas or Electric hot water unit for kitchen	1	1	1	1	1
Gas or Electric hot water unit for bathroom	1	1	1	1	1
Electric & Gas cooker with 4 burners, a grill and an oven	0	0	0	0	0
Electric cooker 2 elements	1	1	1	1	1
Primus stove	1	1	1	1	1
Solar lump	2	2	2	1	1
Dustbin	1	1	1	1	1

Item Description	Quantity per House Type				
	Type I	Type II	Type III	Type IV	Type V
Waste paper basket	3	1	2	2	2
Fire extinguisher at least 9L capacity	1	1	1	1	1
Air conditioner unit (medium size)	8	8	3	1	0
2m x 1.5m high curtain with lining	8	8	4	2	0
1m x 1.5m high curtain with lining	12	12	6	3	1

132.3 ENGINEER'S MAIN OFFICE

The contractor shall provide a furnished and equipped main office of plan area not smaller than 155 metre square that is equivalent of the MoPW Standard Resident Engineer's Office. This office shall be of weatherproof construction, provided with mosquito proof and burglar-proof windows and lockable doors and suitably insulated against heat and cold, fitted with air conditioning units, 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.

A telephone shall also be provided for the Resident Engineer's office for his exclusive use. All the charges and fees related to the installation, maintenance and operation of the telephone including provision of internet services shall be deemed to have been included in the rates for providing and maintaining the Main Office.

The offices shall be provided with day and night watchmen and security lights, the cost of which shall be deemed to have been included in the rates for the offices.

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.

Measurement and payment for the Engineers office and laboratory shall be as specified in the standard specifications. The rate inserted for provision of the main office shall include the cost of complying with the requirements of clauses 117, 124, 125, 132, 133, 134, 135, 136 and 137 of the standard specifications. The office building 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.

The Contractor, when instructed, shall provide and install at the Engineer's office the Equipment specified below with a dealer's certificate and warranty:

a) Photocopying Machine 2No.

Digital copier with the following minimum specifications:

Color: Black & white

Copy Speed A4: 41 - 50 PPM

Print Speed A3: 20 PPM, A4 – 40PPM

Resolution: 600 x 600 dpi

2 x 500 sheet paper cassettes Standard

200 sheets Multipurpose Bypass Standard

Copier Memory 1024MB Standard Min - (Max 2GB) + 80 GB Standard

Printer Memory 1024MB Standard Min (Max 2GB) + 80 GB Shared with copier

25%- 400% Zoom

Paper size A6 – A3

Recommended monthly volume 6000 copies

Type: Free Standing

b) Personal Computer (PC) 2 No.

The rate inserted for the PCs shall include for the provision of the UPS, a Printer and the software specified below for each PC.

1. ProcessorIntel Core i7 – 2600 (3.4GHZ, 8MB cache, 4 Cores)
2. RAM 16GB - DDR SDRAM
3. Hard Disk SATA, 1 TB, and Min 7200 RPM
4. Display 17" TFT Colour SVGA with NVidia or Radeon graphics accelerator with min 1GB video RAM Motherboard FSB speed: 1GHz
5. Expansion slots 4No.
6. Ports 6 USB ports (minimum)
7. Operating system Windows 10
8. Fully multimedia 4 speed CD ROM 52X (minimum) with sound card and two external speakers 10W minimum.
9. Network Network Ready, Wi-Fi
10. Blu-Ray Drive, not anything less than DVD superdrive 2 years' warranty less than DVD superdrive 2 years' warranty

(c) Laptop 8 No.

The rate inserted for the Laptop shall include for the provision of a Printer and the software specified below for each laptop.

1. Processor **Intel Core i7** or higher
2. RAM DDR SDRAM 1GHz speed, 16GB (minimum)

3. Disk Cache 1024 MB (minimum)
4. Hard Drive 1 TB 5400 rpm SATA
5. Video Graphics NVIDIA GeForce 940M (2GB DDR3Lm dedicated)
6. Keyboard Full-size island-style backlit with numeric keypad
7. Expansion slots 1 multi format-SD media card reader, 1 HDMI, 1 headphone/microphone combo, 1 RJ45
8. Ports 4 USB ports 3.0 (1 USB Boost)
9. Operating system Windows 10
10. Pointing Device Imagepad with multi-touch gesture support
11. Network card Integrated 10/100/1000 Gigabit Ethernet LAN
12. Wireless Connectivity – 802.11a/b/g/n/ac and Bluetooth 4.0 combo
13. Sound Bang & Olufsen with 4 speakers and 1 subwoofer
14. Optical Drive SuperMulti DVD burner
15. Two years' warranty
16. Battery life, min 6 hours
17. Built-in webcam, min 2MP

Laser jet Printer specifications

1. Speed 20ppm
2. Memory 32MB expandable to 80MB
3. Resolution 1200Xx1200dpi
4. Compatibility MS Windows 95/98/2000/XP/Vista
5. Power input 220-240V
6. Paper size A6 – A4 (A3 for 1No. printer)

1 No. Laptop shall be supplied with a printer capable of printing in A3 paper size. While the rest PCs and laptops to be supplied with A4 LaserJet printers of model Hp2050 or better approved.

UPS specifications

1. Rating 650 VAC (minimum)
2. Input Voltage 220-240V (minimum)
3. Output 220-240V (minimum)
4. Output frequency 50-60HZ
5. Battery module minimum 60 minutes' backup time on 50% rated
   a) Sealed Lead-acid
   b) Short recharge time (max. 5 hours for 100%)
6. Protection Output overload
   Input output short-circuit

Software

1. Microsoft Office 2024 Professional or later with licence
2. Autodesk Civil 3D 2024 or later; 4 no. CD and multi user licenses
3. Antivirus: McAfee Virus Scan Professional (Latest Version)

Prior to purchase of the computers, laptops and printers, the contractor shall submit the specifications of the same to the Engineer for approval. The Personal Computers, Laptops, printers, UPSs and Photocopying Machine shall revert to the Employer at the end of the Contract. The contractor shall be paid for these items under appropriate bill items in the BoQ.

LIST OF FURNITURE FOR ENGINEER'S OFFICE

ITEM	DESCRIPTION	No.
1	Executive office desk	2
2	Executive office chair	2
3	Conference table 12 seater	1
4	Standard office desk 2.2x0.9 lockable drawers	6
5	Standard office chairs	3
6	Office desks 1.4x0.9 lockable drawers	10
7	Office chairs	22
8	Office desks 3x1 drawers	9
10	Filing cabinets 6 drawers	8
11	Filing cabinets 4 drawers	3
12	Curtains	As applicable
13	Office cupboard	3
14	Refrigerator min. capacity 1.0 m^3	1
15	Water dispenser (hot and cold)	2
16	Waste paper basket	10
17	Stapling machine (ofrex) and pins	3
18	Paper punch	3
19	Scientific calculator (fx 992s)	10
20	Fully equipped first Aid Kit	2
21	Electric heater fans	4
22	Wall clocks battery powered	5
23	Filing trays	12

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

Note: No separate payment shall be made for provision and maintaining of the above furniture for both the RE's office and houses. This will be deemed to have been included in the rate for provision of the same under the appropriate bill items.

132.4 ENGINEER'S LABORATORY AND SURVEY EQUIPMENT

The Contractor shall provide and maintain for the duration of the contract the 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 laboratory shall be sited adjacent to the Resident Engineer's main office and shall revert to the contractor at the end of the contract.

The laboratory shall have piped potable water supply and a continuous electricity supply adequate for lighting, heating and operating the laboratory equipment.

The laboratory shall have a height from floor to ceiling of not less than 2.75 metres and all rooms shall be fitted with electric lighting and power points as instructed by the Engineer's Representative, and each door shall be fitted with a good quality mortise lock and provide with two keys.

Soaking tanks for CBR specimens shall be provided at floor level in the laboratory. Concrete cube curing tanks of adequate size shall also be provided. Both the CBR tanks and concrete cube curing shall have drainage pipes built-in.

The following rooms and facilities shall be provided in the Laboratory: -

(i) Office

This room shall have a total floor area of not less than 14 square metres and a total window area of not less than 2 square meters. The door and windows shall be fitted with fly screens covered with mosquito gauze. The floor shall be of concrete with a float finish. The walls shall be lined and ceiling provided.

A display board of soft board or similar approved material, with a minimum surface area of 3 square metres shall be provided and securely fixed to the wall.

(ii) Main Laboratory

This room shall have a total area of not less than 55 square meters and a total window area of not less than 7 square metres. The external entrance shall be a double door and single doors shall be provided for access to the adjacent offices. The external door and all windows shall be fitted with fly screens covered with mosquito gauze.

The floor shall be of concrete and float finished. The room shall be fitted out as indicated by the Engineer's Representative with three rigidly constructed work benches each minimum 2 metres long by 1-metre-wide by 1 metre high and with top comprising either metal lined hard wood or steel float finished concrete at least 75mm thick and suitably reinforced, with a sink minimum size 600mm long by 450mm wide by 300mm deep fitted with a tap and waste pipe. Wall shelves, 450mm in width and having a surface area of at least 6 square metres, shall be provided and securely fitted.

Two display boards of soft board or similar approved material, each with minimum area of 3 square metres, shall be securely affixed to the walls as directed by the Engineer's Representative.

(iii) Small Laboratory Room

This room shall have a total floor area of not less than 20 square metres and a total window area of not less than 2 square metres. The windows shall be fitted with fly screens covered with mosquito gauze. A single door shall provide access to the main laboratory room. The floor shall be fitted out as indicated by the Engineer's Representative with two rigidly constructed work benches each of minimum dimensions 2 metres long by 1-metre-wide by 1 metre high with a top comprising either metal lined hardwood or a steel float concrete finish of at least 75mm thickness and suitably reinforced, with a sink of minimum size 600mm long by 450mm wide by 300mm deep fitted with a tap and waste pipe and concreted to the water supply for the main laboratory room. An approved air extractor fan shall be fitted through an outside wall.

(iv) Store Rooms

These rooms having a total floor area of not less than 20 square metres shall be provided adjacent to the main laboratory building in a position to be indicated by the Engineer's Representative.

(v) Concrete Slab for Sample Drying

A reinforced concrete slab 100mm thick and of total area not less than 20 square metres shall be provided adjacent to the main laboratory building in a position to be indicated by the Engineer's Representative. The slab shall have a smooth finish to the satisfaction of 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 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 (3) 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

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 Contractors 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.

132.5 MOBILE PHONES FOR ENGINEER'S STAFF AND OFFICE

The Contractor shall, if so instructed by the Engineer provide, connect and maintain mobile phones for the exclusive use by the Engineer and for the duration of the contract. The Contractor shall provide air-time for these mobile phones as directed by the Engineer and be reimbursed under appropriate items in the Bills of Quantities.

133 TIME FOR ERECTION OF THE ENGINEER'S OFFICE AND LABORATORY

As per standard Specifications

135 MAINTENANCE OF THE ENGINEER'S STAFF HOUSES, OFFICES LABORATORIES, FURNITURE AND EQUIPMENT

Until the issue of the Taking-over certificate for the whole of the Works, and if required for a period thereafter until the Contractor has completed any outstanding work."

135.1 Provision of Maintenance and Security

The Contractor shall maintain all furniture and equipment provided by him in a useable state of repair and shall replace promptly any item that becomes unserviceable or is lost.

The Contractor shall provide cleaners, grounds men, and day and night watchmen for housing camp and offices as directed or instructed by the Engineer on site, the cost of which shall be included in the rates for providing houses, offices and laboratory.

Additional armed security shall also be provided as instructed by the Engineer and payment done under the appropriate item in the Bill of Quantities.

137 ATTENDANCES UPON THE ENGINEER AND HIS STAFF

The Contractor shall pay wages (including all overtime) and provide housing for all attendant staff to fulfill the requirements of Clause 137 of the Standard Specifications. Such payments shall be made **NOT LATER** than the 5th day of the subsequent month. Failure to make prompt payment will result in a surcharge of 10% on the amount due.

The number of junior support staff required by the Engineer shall be as indicated in the Bill of Quantities or 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. The payment referred to in this clause shall exclude the cost of maintaining the offices in compliance with clause 137, paragraphs 1, 2 and 4 of the standard specifications which are deemed to be included in the rates for providing the Office.

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 for the exclusive use of the Engineer and his staff throughout the contract, brand new vehicles, as described in the Bill of Quantities.

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 including recognized days of rest.

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 4,000Km per veh.month), shall be by vehicle months. Payment for mileage above 4,000Km per vehicle month, 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.

139 RECEIPTED ACCOUNTS

The Contractor may be 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.

140 PAYMENT OF OVERTIME FOR ENGINEER'S JUNIOR STAFF

In the last line delete the words "shall be at the Contractor's expense" and substitute with "including the approved percentage for administrative overheads shall be paid by the Contractor to the Engineer".

If the Contractor wishes to execute permanent works outside the Engineer's normal working hours as stated in Clause 45.1 of the Conditions of Contract, then the payment for overtime for the Engineer's junior staff shall be reimbursed in full by the Contractor to the Engineer plus a 20 percent additional amount to cover for the Engineer's administrative overheads.

If the Contractor wishes to execute the works on regular basis outside the Engineer's normal working hours, over a prolonged period, the Engineer may, if he deems it necessary, employ additional supervisory staff for which the required salaries, plus twenty (20%) percent additional amount to cover for the Engineer's administrative overheads shall be reimbursed in full by the Contractor to the Engineer. In addition, the Contractor shall provide the required accommodation for such staff at his own cost. The Contractor shall not be reimbursed any of these costs.

141 MEASUREMENT AND PAYMENT

Delete Sub-Clause 141 (a) entirely and substitute with: -

a) No Preliminary item has been included in this Contract. All Contractor's mobilization and general costs shall therefore be included in relevant rates in the Bill of Quantities.

Delete Sub-Clause 141 (m) entirely

142 ENVIRONMENTAL PROTECTION

Further to the requirements of Clause 19.1 of the Conditions of Contract, the Contractor shall be responsible for the following measures to protect the environment:

1) Compliance with national and local statutes and regulations relating to protection of the environment. The Contractor will be responsible for familiarizing himself with all existing national and local legislation in this regard.

2) All construction activities shall be carried out using the best possible means to reduce environmental pollution such as noise, dust and smoke. All vehicles and plant shall be regularly serviced in accordance with the manufacturer's recommendations to ensure that they operate efficiently and without excessive noxious emissions. The Engineer will have the authority to instruct the Contractor to temporarily cease operations and/or remove from the site vehicles or plant which do not comply with this requirement, until such time that he is satisfied that best practicable means to reduce environmental pollution to a minimum are being used.

3) The Contractor shall at all times maintain all sites under his control in a clean and tidy condition and shall provide appropriate and adequate facilities for the temporary storage of all waste prior to proper approved disposal.

4) The Contractor shall be responsible for the safe transportation and disposal of all waste generated as a result of his activities in such a manner as will not give rise to environmental pollution in any form, or hazard to human or animal health. In the event of any third party being employed to dispose of waste, the Contractor shall be considered to have discharged his responsibilities under this clause from the time at which waste leaves sites under his control, providing that he has satisfied himself that the proposed transportation and disposal arrangements are such as will not give rise to pollution or health hazard.

5) The Contractor shall be responsible for the provision of adequate sanitary facilities for his workforce, and that of his sub-contractors, at all construction and ancillary sites. The Contractor shall not allow the discharge of any untreated sanitary waste to groundwater or any surface watercourse.

   Prior to the mobilization of the workforce the Contractor shall provide details of proposed sanitary arrangements to the Engineer for approval, such as will allow him to assess whether or not the proposed facilities are adequate and are unlikely to pollute water resources, and also that the facilities will be properly operated and maintained.

6) All concrete and asphalt plants shall be operated and maintained in accordance with the original manufacturer's specifications and manuals, and in such a manner as to minimize emissions of hydrocarbons and particulates. If, in the opinion of the Engineer, the operation of such plant is causing, or is likely to cause nuisance or health problems to site staff or the general public, the Contractor shall carry out such work as is necessary to reduce emissions to an acceptable level within a time-scale agreed with the Engineer.

7) The Contractor shall regularly dowse with water all exposed dirt surfaces to reduce dust levels.

8) The Contractor shall take all reasonable measures, at all sites under his control, to prevent spillage and leakage of materials likely to cause pollution of water resources. Such measures shall include, but not be limited to the provision of bunds around fuel, oil and bitumen storage facilities, and provision of oil and grease traps for servicing and fuelling areas. Prior to construction of such facilities, the Contractor shall submit details of pollution prevention measures to the Engineer for his approval.

9) The Contractor shall be responsible for ensuring that exposed surfaces are re-vegetated as construction progresses, all to the satisfaction of the Engineer.

10) The removal of trees shall be kept to the minimum necessary to accommodate the Permanent Works.

    Prior to the removal of any trees the Contractor shall inform the Engineer of the intended operation and obtain the permission of the Engineer for the removal of the trees. If any tree is removed without permission the Contractor shall replant another approved tree at no additional cost to the Employer.

11) The Contractor shall ensure that fires, except for controlled fires for burning rubbish, do not start within the Site or in the environs thereto as a result of the works or from the actions of his employees. The burning of waste, such as vehicle tyres causing noxious emissions is prohibited. The Contractor shall have available at all times trained fire-fighting personnel provided with adequate fire-fighting equipment to deal with all fires. The Contractor shall additionally at all times provide sufficient fire protection and fighting equipment local to parts of the Works which constitute particular fire hazards.

12) The contractor shall as instructed by the Engineer carry out off – road mitigation measures to the approval and satisfaction of the Engineer and to the required standards. The contractor shall obtain Environmental mitigation license for the same and also comply with Environmental Management Coordination Act (EMCA) 1999, and Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations 2003.

No separate payment shall be made in respect of this Clause 142 and the Contractor shall be deemed to have allowed in his general rates and prices for the cost of complying with the requirements of this Clauses.

144 COPIES OF ORDERS AND REQUISITIONS

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

145 SHORTAGE OF BITUMEN AND OTHER MATERIALS

The Contractor shall make provisions for obtaining bitumen and other materials required for the Contract if they are not available locally. In particular, the Employer shall not be liable for any additional costs due to local lack of bitumen or any other materials.

146 BASELINE STUDIES FOR SOCIAL AND ECONOMIC IMPACT STUDIES

This specification sets out the Contractor's obligations with regard to instituting a baseline study for social and economic impact for the project within the area.

146A GENERAL REQUIREMENTS

(a) Social and Economic impact studies

The Contractor shall institute Social and Economic impact studies through a consultant so as to conduct a baseline survey, midterm evaluation and impact evaluation to all the component of the project.

The exercise in baseline survey and impact evaluation will be carried out in coordination with the Authority's for capacity development and technical assistance.

(b) Objective

The objective of the assignment is to establish baseline data on the agreed indicators between the Authority and the consultant in reference to the project appraisal result framework covering the project road section and other impact areas. The baseline data will be monitored bi-annually during project implementation and evaluated at midterm and end term.

Thereafter using the collected data the project will be subjected to impact evaluation assess the benefits and draw lessons learnt from the project.

The impact study findings shall be used for planning and packaging future projects and guiding the impact assessment on target groups. The specific tasks for the consultancy services on the study shall include:

(c) Scope of the Study

Road development or improvement is geared towards improving the general welfare of the country and directly to the communities within the project impact area. To quantify change with respect to the project intervention to address the identified issues such as inadequate transport capacity, road crashes and high road user cost along Project road and its environs, the consultant shall conduct a study to document the current status on the identified socioeconomic information or pillars , carrying a follow up surveys to analyze the pre and post-intervention change at mid-term (after 2 years of implementation or 50% time elapse of contractual work project whichever is earlier) and end term evaluation of the project (1-2 years after project completion), the consult will incorporate the non – project area Project road section as a controlled section to assist in comparative analysis at the end of the project.

The end-line survey for project impact study is expected to develop household and community questionnaires, focus group interviews and key informant discussions

for quantitative impact evaluation, and implement the survey in the field (must refer the baseline survey questionnaire).

All survey instruments should be based on a thorough review of relevant literature and existing questionnaires, such as the Kenya Census Survey 2019, Kenya Integrated Household and Budget Surveys (KIHBS), Demographic and Health Surveys (DHS) and the Micro, Small and Medium Enterprise Study. The end-line survey should, therefore, be designed to capture not only project outputs (e.g. roads length built, employment etc) and outcomes (e.g. market prices, agricultural productivity, access to markets and services, travel times, traffic volume and travel costs) but also impacts/final welfare outcomes (e.g. income/expenditure, health and women's empowerment) and institutional capacity development in the Authority under training component.

Contractor Responsibilities

The Contractor will employ and designate a qualified Consultant to be approved by the Engineer, who will work closely with the Client and other relevant bodies so as to undertake the exercise.

Reporting

The Consultant shall prepare a draft report which shall summarize the findings, analysis, results and recommendations of the socio-economic baseline and shall contain all supporting materials to be submitted as will be directed by the Engineer.The Consultant will therefore be required to make adequate provision for documentation at Inception, during midterm and Final End Term report.

Payment

Payment shall be made as per the program approved by the Engineer.

SECTION 2 - MATERIALS AND TESTING OF MATERIALS

All materials testing shall be in accordance with Section 2 of the Standard Specifications.

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;

a) After four days soaking in the case of neat materials and

b) After seven days curing plus seven days soaking in the case of cement/lime improved materials

211 BITUMINOUS BINDERS

a) Requirements

Straight run bitumen in addition to the requirements of the Standard Specification the ash content of penetration grade bitumen shall not exceed 5% by weight

b) Types of Bitumen

Prime coat shall be type MC30 unless otherwise stated. Tack coat shall be K1-70 emulsion. For surface dressing the binder shall be 80/100 pen grade bitumen cut back or straight run while binder for asphalt concrete shall be 60/70 pen grade bitumen

228 WORKMANSHIP AND QUALITY CONTROL

The Contractor shall, not later than 4 weeks after the notice to commence the Works, submit a project specific Quality Management System, including the Work Method Statements and Quality Audit for major items of work, showing how all the Contractor's systems will ensure that all the works will conform to the Contract documents. The onus rests with the Contractor to produce work which conforms in quality and accuracy of detail to all the requirements of the Specifications and Drawings, and the Contractor shall, at his/her own expense, institute a quality control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians and other technical staff, together with all transport, instruments and equipment, to ensure adequate supervision and positive control of the Works at all times. The Contractor shall provide chainmen and labourers as necessary for the Engineer to carry out checks on the Works

The Contractor shall conduct tests or have them conducted continually on a regular basis, to check the properties of natural materials and processed natural materials and of products manufactured on the site, such as concrete and asphalt. The Contractor shall remain fully responsible for any defective material or equipment provided by him. Similarly, the quality of all elements of the Works shall be checked on a regular basis so as to ensure compliance with the specified requirements

The intensity of control and of tests to be conducted by the Contractor in terms of these obligations shall be adequate to ensure that proper control is being exercised.

Where any natural materials or products made from natural materials are supplied, and upon completion of each element of the construction work, the Contractor shall test and check such materials, products and/or elements for compliance with the specified requirements and shall submit his results to the Engineer for approval. Such submission shall include all his measurements and test results and shall furnish adequate proof of compliance with the specified requirements

No specific pay items are provided as compensation for the above obligations, including the provision of all samples delivered to the Engineer, the repair of places from which samples were taken, and the provision of the necessary personnel and testing apparatus and facilities, for which compensation shall be included in the bid rates of the Contractor for the various items of work to which these obligations apply.

The Contractor shall submit to the Engineer for examination, the results of all relevant tests, measurements and levels indicating compliance with the Specifications on completion of every part of the Work

SECTION 3 - SETTING OUT & TOLERANCES

301 SETTING OUT

a) In addition to the provisions of clause 3.01(a) if the traverse points to be used for the setting out are close to the existing carriageway and interfere with construction works then the Contractor will have to relocate them to a location where they will not be disturbed. The co-ordinates and heights of all traverse points so located shall be listed and provided to the Engineer for checking and/or approval. Contractor shall also monument the new centreline every 200m along straight and all salient points along curves by a pin in the concrete beacon before commencement of any works.

The road reserve boundary posts shall have 12mm diameter steel pins embedded in concrete, 200mm long with 25mm exposed to the air, sticking out form its top surface. This pin shall be co-ordinated and heighted 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.

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 Kms of the road.

b) Detailed Setting Out

Reference pegs shall be 50mm by 50mm in section 600mm long driven 400mm firmly into ground and painted white above the ground. The offset from centre line shall be indicated by small nail 20mm to 25mm long with its head driven flush with the top of the peg. Chainages, offset and reference elevation shall be clearly indicated to the sides of the peg to the satisfaction of the Engineer.

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

302 TOLERANCES

Add the following:

a) Pavement Widths

For Pavement widths for subbase, base and wearing course, the allowable tolerances shall be 0 to +50 mm.

b) Pipe Culverts

The maximum deviation from the specified line of a drainage pipe shall be:

Horizontal	25mm in 3.0 m
Vertical	30 mm in 10.0 m

SECTION 4- SITE CLEARANCE AND TOP SOIL STRIPPING

401 SITE CLEARANCE

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

Add the following as the last paragraph in Sub-clause (a):

Site clearance is not required over the gravelled width of existing road and shoulders. No measurement and payment for site clearance will be made for this width. The remaining area within the road reserve including sides of existing embankments and cuttings shall be cleared as instructed by the Engineer. This operation shall also include the removal of all trees, except for some trees as directed by the Engineer. The Contractor shall provide paint and all the assistance the Engineer may require to mark the trees which **should not** be removed during site clearance.

The Contractor shall take care not to uproot or damage trees which are within the road reserve but outside the construction width. After the Contractor has staked out the extent of the road, the Engineer, with the assistance of the Contractor, shall mark out the trees to be removed. After removal, the trunks and branches of these trees shall be cut up into pieces not more than 2.0m in length, transported and neatly stored at the nearest Ministry of Roads camp or otherwise in a position to be indicated by the Engineer. No additional payment shall be made for complying with these requirements and it is deemed the Contractor will have included its cost in the rates for site clearance.

402 REMOVAL OF TOPSOIL

Topsoil shall include up to 200mm depth of any unsuitable material encountered in existing or newly constructed drains, drainage channels, and accesses.

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

When instructed by the Engineer, the Contractor shall demolish or remove any structure. Measurement for the works shall be done on dayworks basis and payments made under the appropriate item in the Bills of Quantities.

SECTION 5 – EARTHWORKS

501 SCOPE OF SECTION

The scope of this section includes all earthworks associated with the Contract, including roadside amenities, service roads, walkways and any widenings.

504 PREPARATION PRIOR TO FORMING EMBANKMENT

In cuttings, the contractor shall excavate to a level that would accommodate the 300mm subgrade and the existing ground below this **MUST** be processed and compacted in accordance with clause 504 of the standard specifications.

Where benching is required to existing pavement to accommodate new cross section, the rate for compaction of resultant ground shall be deemed to cover this activity

Excavation in the pavement of the existing road shall be kept dry. In the event of water penetrating the underlying layer, construction of the subsequent layers shall be postponed until the underlying layers are dry enough to accommodate the construction plant without deforming or otherwise showing distress. This shall be confirmed through proof-rolling.

Step construction shall be carried out per layer at the joint where excavating both vertically and perpendicular to the direction of the travel. The step shall be 500mm perpendicular to the direction of the travel and 150mm vertical unless otherwise instructed by the Engineer

Special care shall be taken when compacting the new material at the joint ensuring that specified density is achieved

505 CONSTRUCTION OF EMBANKMENTS

Only material approved by the Engineer shall be used in embankments. Soft fill material shall comply with the following requirements:

- Organic matter less than 5% by weight
- CBR of not less than 10% for carriageway and shoulders measured after 4-day soak on a laboratory mix compacted to a dry density of 95% (AASHTO T 99)
- Swell less than 1% on the laboratory mixed sample

Subgrade is defined on the Drawings, and subgrade material shall comply with the requirements of Clause 505 except that the CBR shall have a value of not less than 14% measured after a four (4) day soak on a laboratory mix compacted to a dry density of 95% MDD (AASHTO T180)

Improved subgrade layer is defined on the Drawings and shall comply with the following requirements:

- CBR of not less than 14% measured after 4day soak on a laboratory mix compacted to a dry density of 100% (AASHTO T 99)
- Plasticity Index less than 30%
- Swell less than 1% on the laboratory mix sample.
- Placed in layers not exceeding 150mm thick

Improved subgrade shall mean the upper 450mm of earthworks, either in-situ or in fill and subgrade shall be provided as part of the earthwork operation, and payment shall be made as fill.

No extra payment will be made for haulage of suitable material from borrow pits as the overhaul costs shall be deemed to have been factored in the rates inserted in the Bills of Quantities

508 COMPACTION OF EARTHWORKS

At pipe culverts, all fill above ground level around the culverts shall be compacted to density of 97% MDD (AASHTO T180) up to the level of the top of the pipes or top of the surround(s), if any and for a width equal to the internal diameter of the pipe on either side of the pipe(s) or surround(s) as applicable.

At locations adjacent to structures (up to 100m away from structure), all fill above ground level up to the underside of the subgrade shall be compacted to density of 95% MDD (AASHTO T180). In case of fill around box culverts this should be carried out for the full width of the fill and for a length bounded by the vertical plane passing through the ends of the wingwalls

Notwithstanding the provision of clause 503 of the standard Specification, Compaction of subgrade material (i.e. material immediately below formation) in cut areas shall not be carried out by the contractor in areas where the formation is formed in hard material, unless specific instructions to the contrary are issued by the Engineer

Where improved sub-grade material shall be required, the material shall have a CBR greater than 14% and this shall be compacted and finished to the same standards and tolerances as those required for normal subgrade and clauses in the specifications applying to normal subgrade shall also apply.

509 MASS-HAUL DIAGRAM

Delete Clause 509 entirely and substitute “No Mass-Haul diagram has been provided with the Documents. The Contractor shall be responsible for locating suitable materials for constructing earthworks along the alignment and elsewhere and shall include in his rates for fill, spoil and for the cost of haulage”.

511 BORROW PITS

The first part of the Standard Specification is amended as follows: -

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 contrary to what has been stated.

515 SIDE DRAINS

Whenever excavation works in side drains constitutes a separate operation from the bulk earthworks, such excavation shall be classified as catchwater drains under Section 8 of the Specifications

517 MEASUREMENT AND PAYMENT

Notwithstanding the provisions of clause 517 of the standard specifications, the rate for compaction of fill in soft material shall allow for the requirements of clause 508 of the special specification and no extra payment shall be made for compaction around pipe culverts (97% MDD AASHTO T180)

Quantities for embankment widening shall be measured using the final compacted volume of fill material over the existing embankment after removal of topsoil. Payment for fill for widening shall be made under Item 5.01 of the Bill of Quantities. No 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. The Contractor shall include the cost of benching in his rates and prices.

The rate for cut to spoil shall also allow for cutting to spoil in any waterlogged areas.

No separate payment shall be made for overhaul, and the cost of haulage shall be included in the Contractor's rates and prices for earthworks.

The rates in the Bill of Quantities shall also include for earthworks associated with roadside amenities, service roads, walkways and any widenings

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 the 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 this 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

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 97% MDD (AASHTO T180) immediately before structures are constructed.

Paragraph 4, last line: - Replace "95%" with "97%" and “T99” with “T180”

707 BACKFILLING FOR STRUCTURES

All backfilling material shall be selected backfill complying with the requirements for a natural subbase material given in Clause 1203. Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 97% MDD (AASHTO T180).

Porous filter material shall be clean, uniform, sand or crushed aggregate with a d50 between 0.4mm and 1.2mm and less than 5% particles finer than 75micron sieve. The d100 must be lower than 5mm

709 EXCAVATIONS FOR RIVER TRAINING AND NEW WATER COURSES

Payments for river training and establishment of new watercourses 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 to drains, inlets and outlets of culverts, to embankments and around structure shall consist of sound unweathered rock 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. Cement mortar 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 cement shall be mixed with sand in the ratio of 1:3 by volume to form the grout.

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. Soil erosion is rampant along the project location and this can be minimized by ensuring that proper protection works is carried out along the drains using stone pitching. Most of the sections shall be stone pitched especially areas where we have steep slopes to minimize undermining of the road by rain water or as may be instructed by the Engineer.

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 reconstruction 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 KeNHA's Regional Director's offices

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 95% MDD compaction (AASHTO T180)

714 BACKFILL BELOW STRUCTURES

All backfilling material shall be selected backfill complying with the requirements for a natural subbase material given in Clause 1203. Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 97% MDD (AASHTO T180).

SECTION 8 - CULVERTS AND DRAINAGE WORKS

All concrete works for culverts and other drainage structures shall be done in accordance with Section 17 of the specifications

801 SCOPE OF SECTION

Amend as follows:

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 600 mm, 900 mm or 1200 mm diameter pipe culverts using the balloon casting technology or precast pipes rings.
- Desilting and cleaning of existing pipes and outfall drains to make them free flowing.

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

The Standard Specifications are amended as follows:

(a) In paragraph 6, line 3, and in paragraph 7, line 5 and in paragraph 11, line 6, "95% MDD (AASHTO T99)" and insert "97% MDD (AASHTO T180)".

(b) Removal of Existing Pipe Culverts

Where instructed by the Engineer, the Contractor shall excavate and remove existing culvert pipes and the void left after removal of culvert pipes shall be widened as necessary to accommodate new concrete bedding, pipe and haunching.

The void left by removal of pipes and end-structures shall be carefully preserved in order to accommodate replacement with 600 mm, 900 mm or 1200 mm diameter pipe culverts as directed by the Engineer.

Regarding backfill, reference is made to Clause 812.

(c) 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% MDD (AASHTO T99)" and insert "97% MDD (AASHTO T180").

In sub-clause 809(a), paragraph 1, line 1, substitute "95% MDD (AASHTO T99)" with "97% MDD (AASHTO T180").

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to "97% MDD (AASHTO T180").

Hard material is material, which 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 $0.2m^3$ occurring in soft material shall be classified as hard material.

809 BEDDING AND LAYING OF PIPE CULVERTS

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

Amend sub-clause 809(b), paragraph 1 as follows:

Where pipes are laid on a concrete bed the pipes shall be bedded on class 15/20 concrete at least 50mm thick, and extending the full width and length of the pipe barrel.

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 97% MDD (AASHTO T180)".

Add the following Sub-Clause 809(d):

Bedding, Laying and Surround for Concrete Pipe Culverts Cast In-Situ

In addition to the requirements of the Standard Specification, where the inflatable balloon method of casting culverts in-situ is used, thorough pre-construction trials shall be carried out and the necessary adjustments made to ensure that: -

(i) Line and grade of the culverts is achievable

(ii) The balloons and the pressure gauge/machine are in good working conditions

(iii) The inner concrete barrel surface immediately in contact with the inflated balloon form shall achieve class F3 finish.

Besides this the following amendments shall be made; -

(a) Where inflatable balloons are used, the surround shall be 200mm.

(b) Concrete surround shall be “class 20/20”.

(c) BRC A193 mesh will be provided within the surround and bed as provided for in the drawings or as instructed by the engineer

The Contractor may propose an alternative method of casting culverts in-situ, which shall be subject to the approval of the Engineer. Culverts shall be constructed to conform with dimensions shown on the drawings.

Measurement and payment for culverts cast in-situ by use of balloon method or any other approved method shall be made per linear meter under the existing bill items. The rates inserted shall allow for compaction of the bottom of excavation to 100% MDD (AASHTO T.99) and the BRC mesh used.

810 JOINTING CONCRETE PIPES

Add as follows:

The concrete pipes for the culverts shall have ogee joints and will be jointed by 1:2 cement: sand mortar and provided with fillets on the outside as described in clause 810 of the Standard Specification.

811 CONCRETE BEDS, SURROUNDS AND HAUNCHES

Amend the Standard Specification line 1 of the second paragraph, to read as follows:-

All concrete for beds shall be of class 15/20 whilst concrete for surrounds and haunches shall be of class 20/20 for cross drain culverts, complying with Section 17 of this Specification formed to the dimensions shown on the drawings or as instructed by the Engineer.

812 BACKFILLING

In the Standard Specifications, clause 812

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

Wherever the expression "dry density of 95% MDD (AASHTO T. 99)" occurs delete and replace with "dry density of 97% MDD (AASHTO T180)".

The rates entered for laying of pipe culverts shall allow for backfilling to pipe culverts and compacting to 97% MDD (AASHTO T180) and these works shall **not** be measured and paid for separately.

812.1 Filter fabric for backfilling behind structures, drains and revetment works

Where filter fabric is specified, it shall be durable non-woven geotextiles or synthetic fibres, unaffected by soil acidity, soil alkalinity and bacteria. The fabric shall be made by an approved, reputable manufacturer and shall have a mass and strength at least equal to the following criteria:

	Mass g/m2	Wide Strip Tensile Strength kN/m2	Mullen Burst Strength kPa
Under and For Drainage Material	180	Mean 12/12	2160
Behind bridges, Box culverts, Under Gabions, Gabion Mattresses or Grouted Rip – Rap	250	Mean 18/18	3040
Under Rip-Rap and Rockfill	300	Mean 21/21	4200

The mesh size of the fabric shall be sufficient to effectively retain the material on which it is placed but shall not be greater than 150 microns.

The fabric shall be installed in accordance with the manufacturer's instructions. The fabric shall be placed on levelled ground, with sharp rocks and other objects which are likely to damage the fabric being removed and all pits and depressions being backfilled and compacted.

The fabric shall be overlapped by a minimum of 300 mm and stitched at joints in such a manner that the strength of the joints is at least 50 per cent of the strength of the fabric.

Rip-rap or gabions or other materials, as applicable, shall be placed carefully on the filter fabric in such a way as to avoid damage to the fabric. In any event construction procedures shall ensure no damage to the filter fabric or impairment of its design function. Should the filter fabric be damaged, it shall be replaced, including removal of the overlay material, in a manner approved by the Engineer.

No mechanical plant shall traffic over filter fabric unless a minimum thickness of 200 mm of fill material has been placed over the fabric.

813 PRECAST CONCRETE OPEN CHANNELS

Add the following to the standard specification clause 813: -

813.1 Half Round Open Channels

These shall be provided as directed by the Engineer and in compliance with sections 813 and 820 of the standard specifications.

813.2 Invert Block Open Channels

These shall be provided as directed by the Engineer and in compliance with sections 813 and 820 of the standard specifications.

Where directed by the Engineer, the Contractor shall excavate in any material provide and place concrete for the bedding, backfill and remove surplus material to spoil, provide, lay and joint precast concrete invert blocks, side slabs, slotted drains and gulley chambers.

Precast concrete invert block side drains and gulley chambers shall comply with the requirements of BS 340, and shall be laid in accordance with the drawings.

Precast concrete invert block drains and side slabs shall be formed of concrete of the class specified and to the dimensions shown on the drawing. Drains shall not normally be laid to a radius of a curvature less than 10 times the bed width or a diameter of the drain.

Invert block drains shall be constructed in the positions and to the levels and dimensions shown on the drawings or as directed by the Engineer. The earth sides to such channels shall be neatly finished to a slope of 1: 1 or such other slope as the Engineer may direct. Invert block drains and side slabs shall be laid on 100 mm thick compacted approved gravel material and neatly jointed with mortar consisting of 1:3 cement: sand by volume.

813.3 Invert Block drain

Where instructed, the Contractor shall excavate, compact the excavated bed to 97% MDD AASHTO (T180), backfill as necessary with selected material compacted to 97% MDD AASHTO (T180) lay and joint invert block drains of 300mm diameter with two side slabs.

814 SUBSOIL DRAINS

Add the following:

In the event of excavation for repairs exposing local seepage, springs or 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 as specified in Clause 814 of the Standard Specification. Where these drains lie within the carriageway, the carriageway shall be reinstated with compacted graded crushed stone or stabilized gravel and surfaced with hot asphalt or a surface dressing as instructed by the Engineer.

Payment will be made in accordance with Clause 820 of the Standard Specification.

814.1 Filter Fabric to Sub-Soil Drains

A filter fabric shall be placed under, around and over rock fill of the sub-soil drains. The provisions and placing of the fabric shall be in accordance with Clause 814 of the Standard Specification and Clause 822 of the Special Specification. Payment shall be in square metre of the fabric used.

817 MITRE DRAINS, CUT-OFF DRAINS, CATCHWATER DRAINS, SIDE DRAINS, CULVERT OUTFALL DRAINS AND EARTH DAMS

Add the following Sub-Clauses:

817.1 Cleaning 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.

No extra payment will be made for cleaning of existing chains, and the costs shall be included in other Bill items.

817.2 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 Bill 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 80 mm thickness and lengths or widths not exceeding 1000 mm. Joints shall be at least 15 mm wide filled with 1:2 cement sand mortar.

817.3 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 specifications, unless suitable for re-use, and deposit of the material in a spoil dump to be approved by the Engineer.

819 CLEANING AND MAINTENANCE

Add the following:

819.1 Desilting of Pipe Culverts

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

No separate payment will be made for such work and provision should be included in the rates.

820 MEASUREMENT AND PAYMENT

Add Sub-Clause 823(r): -

Item : Concrete for balloon cast pipes/culverts

cast in-situ

Unit : m^3

The rate for concrete for each size of culvert instructed shall include for the surround and for the bedding as instructed including the A193 BRC mesh and shuttering, calculated from the dimensions given in the drawings or as directed by the Engineer.

The rate shall also include for the cost of providing and placing the concrete and complying with the requirements of Clauses 809, 810, 814, 819 and 1713 of the Standard Specification.

No extra payment shall be made for provision of inflatable forms/balloons and other requirements for casting culverts in-situ and the Contractor shall be deemed to have provided for these in his rates and prices.

Add Sub-Clause 823(s): -

Item : Invert Block Drain

Unit : m

The payment for the invert block drain shall include the cost of the bottom drain and two side slabs and shall be measured in a linear metre.

Add Sub-Clause 823(t): -

Item : Geotextile

Unit : m2

The payment for the geotextile shall be in square metres and shall include the cost of providing and placing as per the specifications or as instructed by the engineer

SECTION 9 - PASSAGE OF TRAFFIC

901 TRAFFIC CONTROL AND DEVIATIONS

a) Programme for the Control of Traffic

Following the award of the contract, the Contractor shall submit to the Engineer a detailed Traffic Control Plan. Such plan shall be approved by the Engineer, and where necessary, by the appropriate statutory authority, before the Contractor commences work. The plan shall but is not limited to, the method of protection of the public and give details of the duration and hours of operation, location, type and numbers of traffic safety devices, barricades, warning signs, flag men equipped with two way radios and the like. The Traffic Control Plan shall be in accordance with and complimentary to the Programme of Works submitted under Clause 104

During the preparation of this Traffic Control Plan, the Contractor shall take into consideration the following;

i) The Contractor shall conduct his operations in such a manner that no greater length or amount of work is undertaken than he can efficiently carry out having due regard to the rights and conveniences of the public and the requirements of this Section.

ii) If the Contractor proposes a road closure, he shall provide an alternative routing of the traffic, which must be approved by the Engineer.

iii) No revisions shall be made to the Traffic Control Plan without the prior written approval of the Engineer and the Contractor shall allow fourteen (14) days for the Engineer to review any request for revision of the Traffic Control Plan.

iv) The Traffic Control Plan shall conform in all respects with the requirements of this Specification.

b) Penalty to comply with the requirements of Section 9

The failure or refusal to comply on part of the Contractor and or maintain the deviation, improve and maintain the existing road ahead of the works at the proper time, or to take the necessary actions for the safety and convinience of the public traffic as required by the statutory authorities, or as instructed by the Engineer, shall be sufficient cause for the Employer to apply a deduction of Kshs. One Hundred and Fifty Thousand (150,000) per day from any monies due to the Contractor, until all provisions prescribed have been complied with to the satisfaction of the Engineer.

c) Contractor's inspection of the site

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 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.

d) Standard of Construction works

The standard of all works carried out under this Section shall comply with the requirements of the appropriate sections of these Specifications

903 MAINTENANCE OF EXISTING ROAD

The Employer shall hand-over the existing road to the contractor at the commencement of the Contract. The Contractor shall be responsible for all repairs and maintenance during the duration of the Contract. Where the existing road is gravel, the Contractor shall maintain it with suitable approved gravel of properties detailed in 904 (c) below.

Where the existing road is paved, the contractor shall maintain it by repairing the potholes and edge breaks asphalt concrete. The work shall include, but not limited to, excavating and trimming around the pothole or edge break and removing deleterious material

The Contractor shall regularly inspect the road and carry out such repairs and maintenance to the satisfaction of the Engineer. If at any time, the Engineer draws the Contractor's attention to a road section

which requires maintenance, the contractor shall promptly repair the section. The contractor shall be legally responsible for any accident or damage attributable to his failure to maintain the road.

904 CONSTRUCTION OF DEVIATIONS

a) **General**

In addition to requirement of this clause, the maximum length of deviation road shall be restricted to 2Kms 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 2Km of the deviation road only when 80% of the permanent work has been completed on first one and he will not be allowed to open further 2Km till he has completed first 4Km of the road and has it opened to traffic

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

b) Geometry

The carriageway width of the deviations shall not be less than 6.5m wide and suitable for 2-way lorry traffic unless otherwise specified.

c) Construction

Unless otherwise instructed gravel wearing course for the deviation shall be 150mm compacted thickness. The materials shall have a minimum CBR of 20% at "97% MDD (AASHTO T180"), Plasticity Index of less than 15% and grading class 1 as per 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 of 1 - 1.4 litres/m^2 in regular interval to minimize 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 contractor shall be reimbursed in accordance with the standard specifications.

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

907 SIGNS, BARRIERS AND LIGHTS

The Contractor shall provide signs, barriers and lights as shown in the 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, the 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) Maintenance of existing road

The Contractor will be paid by the cubic metre of compacted gravel used to maintain existing road.

(c) 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 installments 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 installments 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.

(d) 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 – SHOUDERS

1101 GENERAL

2.0m wide shoulders whose construction approach is detailed in the drawings shall be constructed in accordance with sections 5, 12, 15 and 16 of the specifications as appropriate

1203 MATERIAL REQUIREMENTS

Natural materials for base and subbase shall conform to the specifications given in Section 12 of the Standard Specifications for cement or lime improved base and subbase.

1209 MEASUREMENT AND PAYMENT

Natural material for subbase and base shall be measured by the cubic metre placed and compacted upon the road calculated as the product of the compacted sectional area laid and the length.

The method of measurement shall be “method - A” as in the standard specifications.

No extra payment will be made for haulage of gravel material as the overhaul costs shall be deemed to have been factored in the rates inserted in the Bills of Quantities

SECTION 13 - CEMENT TREATED GRADED CRUSHED STONE (GCS) FOR BASE-COURSE

Treatment of GCS shall be carried out in accordance with Section 14 of the specifications with the following additional guidelines

1303 MATERIAL REQUIREMENTS

a) Graded Crushed Stone

Properties

Graded Crushed Stone shall comply in all respects comply with Section13 of the Standard Specifications and shall be stone Class B in accordance with Clause 1303(b)

Grading

The Maximum Aggregate Size of the material shall be 0/30mm in accordance with Clause 1303(c)

b) Cement

Cement for treatment shall be CEM II, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 - Part 1, KS 1725: 2001 standards. The cement content of the treated material shall be 2% by weight of the GCS

c) Mixing

The material to be treated and the cement shall be mixed in an approved batching plant

d) Laying and compaction

Laying

Treated GCS shall be placed by using a self-propelled spreader finisher fitted with an electronic level control device, and level control shall be from a tensioned wire supported at every 5m intervals. The graded crushed stone shall be finished to the tolerances given for base in Section 3 of these Specifications

Compaction

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 90% to 100% of the Optimum Moisture Content (Vibrating Hammer Method). Minimum compaction shall be 97% MDD (Vibrating Hammer Method)

1309 PROTECTION AND CURING

Protection and curing shall be carried out in accordance with the provisions of Clause 1409 (i) of the Standard Specification. The treated GCS layer shall be kept continuously damp by spraying with water for seven days after laying to be followed by application of MC70 prime coat

1310 MEASUREMENT AND PAYMENT

Stabilizer

The provision of the stabilizer shall be measured by the tonne calculated as the specific weight of stabilizer added to the material

SECTION 14 - CEMENT TREATED MATERIALS

1401 CEMENT TREATMENT

1401.1 Cement

Cement for improvement shall be CEM II, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 - Part 1, KS 1725: 2001 standards. The cement content for the treated material shall be between 2-3% of the total weight of gravel to be improved. In adopting the cement content for improvement care shall be taken to ensure that base quality improved gravel for sub-base is avoided. The Engineer shall exercise his discretion to any variation in the rate of application of the cement, which he may see fit to order from time to time

1401.2 Lime treatment

Lime treatment will be as outlined in the Standard Specifications for road and bridge construction. The lime content of the stabilized material shall be as indicated by the Engineer.

1401.3 Moisture content and Compaction

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 95% to 105% of the Optimum Moisture Content (AASHTO T180). Minimum compaction shall be 97% MDD (AASHTO T180")

1401.4 Mixing

The material to be treated and the cement shall be mixed in an approved batching plant

1401.5 Laying and compaction

Laying

Treated gravel shall be placed by using a self-propelled spreader finisher fitted with an electronic level control device, and level control shall be from a tensioned wire supported at every 5m intervals. The graded crushed stone shall be finished to the tolerances given for base in Section 3 of these Specifications

Compaction

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 95% to 105% of the Optimum Moisture Content (AASHTO T 180). Minimum compaction shall be 95% MDD (AASHTO T 180)

1409 PROTECTION AND CURING

Protection and curing shall be carried out in accordance with the provisions of Clause 1409 (i) of the Standard Specification. The treated sub-base layer shall be kept continuously damp by spraying with water for seven days after laying to be followed by laying of GCS base-Course

1412 MEASUREMENT AND PAYMENT

Stabilizer

The provision of the stabilizer shall be measured by the tonne calculated as the specific weight of stabilizer added to the material

Mix-in stabilizer

Mixing stabilizer 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.

SECTION 15 - BITUMINOUS SURFACE TREATMENTS

PART A - GENERAL

1501A GENERAL

Quality control, workmanship and equipment shall be to current international best practice. Bituminous surface treatments shall be carefully designed by the Contractor, taking into account traffic volumes, ALD of the chippings, surface conditions and requirements for specific locations. Application rates of the bitumen spray and the chippings will be approved by the Engineer prior to any trail sections of the work, but the under listed is anticipated and can be used for guidance purpose i.e;

a) Chippings

10/14mm size pre-coated chippings at a spread rate of 80-100 square meters per cubic meter as single seal.

b) Bitumen Spray Rates

0.8 - 1.2 l/m^2 of 80/100 penetration grade bitumen (cut back or straight run) for the single seal

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 MC30 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

The rates of spray of the prime coat shall be as instructed by the Engineer and shall generally be within the range 1.0-1.2 litres/square metre

Prime coat shall be applied to all gravel surfaces that are to receive asphalt concrete

The tack coat shall consist of bitumen emulsion K1-60 unless otherwise directed by the Engineer.

The rates of spray of the tack coat shall be as instructed by the Engineer and shall generally be within the range 0.5 - 0.8 litres/square metre

PART C – SURFACE DRESSING

1502C MATERIALS FOR SURFACE DRESSING

Binder

The bituminous binder shall be 60/70 penetration grade bitumen (cut-back with kerosene fuel in accordance with prevailing road temperatures or straight run), and conforming to Clause 211 of the Standard Specification

The Contractor jointly with the Engineer shall carry out a minimum of five (5) bitumen affinity tests on each single size aggregate stockpiles to be used into the works and if any result is less than 95% coverage, then the binder shall be blended with **ColAmin** or similar approved adhesive additive as per manufacturer's instructions at 0.2 - 0.5% by mass of binder. The Contactor shall propose optimum dosage of the adhesive additive by carrying out bitumen affinity tests on the crushed aggregates for approval by the Engineer

Chippings

Chippings shall be of class 2 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 1502C and 1504C 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 SPREAD RATES 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 PRECOATED 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 MC30 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.

No separate payments shall be made for the pre-coating exercise. The contractor shall have included in his rates the cost of complying with this clause

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 instructed, corrected to 15.6 ^{o}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

All Bituminous mixes works shall be done in accordance with the standard specifications.

PART A – GENERAL

1603A CONSTRUCTION PLANT

a) Compaction plant

To achieve specified densities it is expected that vibrating rollers will be required. To achieve satisfactory results it is essential that thorough preconstruction trials be carried out to ensure that the vibrating rollers are set up at the optimum amplitude and frequency for the material being laid, that they do not break down aggregate particles and that the optimum compaction temperatures are established to allow compaction without creating ripple effects or other distortions of the surfacing.

1605A DESIGN AND WORKING MIXES

Delete the second paragraph and insert the following:

At least two months, prior to laying asphalt concrete, the contractor jointly with the Engineer shall carry out design mixes STRICTLY complying with SUPERPAVE requirements (clause 1602B, 1603B & 1604B) using approved constituent materials.

The design process shall be phased as follows:

Phase1: Testing of constituent materials to confirm compliance

Phase 2: Laboratory mix designs complying with all the specifications

Phase3: Plant mixing to confirm compliance with laboratory parameters

Phase 4: Site trials

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advice the Engineer and a new mix design shall be established using the procedure set above

1606A SITE TRIALS

Delete the second paragraph and insert the following:

" The trials shall be carried out to: -

a) Test materials designed in the laboratory so that a workable mix, which satisfies the specification requirements, can be selected.

b) To enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved."

Renumber paragraph 5 from "(v) –(vi)" to read "(v)-(viii)"

1607A MIXING OF AGGREGATES AND BITUMEN

Delete the second and third paragraphs, then add the following:

The aggregates, minus the filler, prepared as specified above, shall be accurately weighed and conveyed into the mixer in proportionate amounts of each aggregate size required to meet the Job-Mix Formula. The required amount of bitumen for each batch shall be introduced into the mixer. In batch mixing, the bitumen shall be added after the aggregates have been introduced into the mixer and mixed for 5 to 10 seconds. The filler shall be added after the bitumen and mixing shall continue

after addition of the filler for at least the time recommended by the plant manufacturer, or as much extra time as is necessary to obtain a homogeneous mixture, but for no longer.

Aggregate and bitumen shall each be heated to enter the mixing chamber at temperatures selected within the range 150 to 170ºC. The temperature of the stone at entry to the mixing chamber shall not be more than 15ºC higher than that of the bitumen; the temperature of the bitumen shall be such that on entry to the mixer its kinematic viscosity is in the range 150 – 300 centistokes. The temperature of the aggregate and bitumen at entry into the mixing chamber shall be chosen within the above limits and having regard to the prevailing air temperature and haulage distance to ensure that the temperature of the mix is between 135ºC and 165ºC when it is laid and not less than 120ºC when rolling is commenced. If excessive displacement occurs under the roller the minimum rolling temperature may be reduced at the sole discretion of the Engineer.

The volume of the aggregate and bitumen shall not be so great as to extend above the tips of the mixer blades when the blades are in vertical position. All overheated and carbonised mixtures, which foam or show indication of moisture, will be rejected. When moisture is detected in the finished mixture, all aggregates in the bins shall be removed and returned to the stockpiles.

1608A TRANSPORTING THE MIXTURE

Delete entire clause and insert the following:

The mix shall be transported from the mixing plant to the spreader in trucks having tight, clean, smooth beds, which have been treated to prevent adhesion of the mixture to the truck bodies. Gasoline, kerosene, diesel fuel or other solvents shall not be used for this purpose. Loads shall be covered by waterproof canvas or metal sheets during wet weather. Vehicles shall be insulated when the air temperature and/or length of haul make this necessary to maintain the temperature between the specified limits. Any loads wetted excessively by rain will be rejected. Hauling over freshly laid material will not be permitted.

1609A LAYING THE MIXTURE

Add the following

Mixtures that have a temperature of less than 135ºC when dumped into the spreader, will be rejected. The spreader shall be adjusted and the speed regulated so that the surface of the course will be smooth and the course of such depth that, when compacted, it will conform to the cross-section shown on the Drawings. Lanes shall be parallel to the road centreline.

Add the following:

All joints shall present the same texture, density and smoothness as other areas of the surfacing. The joints between old and new lanes or sections shall be carefully formed in such manner as to ensure a continuous bond between the old and new pavement. All contact surfaces at cold joints, joints with manholes, pits, etc. shall be coated with a thin, uniform coat of MC70 or other medium curing bitumen.

1610A COMPACTION

Add the following:

Tests for conformity with the smoothness and levels specified shall be made by the Contractor immediately after initial compaction and any deviations in excess of the specified tolerances shall be corrected by loosening the hot surface with rakes and removing or adding material as necessary before continuing the rolling. The speed of the rollers shall not exceed 5 km/h and shall at all times be slow enough to avoid displacement of the hot mixture. Any displacement of the mixture occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once

by loosening the surface with rakes and re-rolling. Rolling of the surfacing shall be continued until all roller marks are eliminated and the required density is obtained.

The rollers shall not be permitted to stand on surfacing which has not been fully compacted. Precautions shall be taken to prevent the dropping of oil, grease, gasoline, or other foreign matter on any layer. The Contractor shall provide competent workmen who are capable of performing all work incidental to the correction of all surfacing irregularities.

After final rolling, no vehicular traffic of any kind shall be permitted for at least 24 hours.

1611A FINISHING, JOINTS AND EDGES

Add the following:

Construction joints in the various pavement layers shall be staggered by at least the following distances:

(a) Joints in binder course relative to joints in wearing course: 500mm

(b) Joints in DBM base relative to joints in wearing course: 400mm

The Contractor shall produce a plan showing the position of all pavement construction joints for approval by the Engineer before pavement construction commences.

Transverse joints in DBM base, binder and wearing course shall be staggered by at least 500mm. The roller shall pass over the unprotected end of the freshly laid mixture only when laying of the surfacing is to be discontinued for such length of time as to permit the mixture to become cold. Otherwise 500mm at the end of the lane shall be left uncompacted.

Cold transverse joints shall be cut back to expose an even, vertical surface for the full compacted thickness of the course and painted with medium curing cutback bitumen as specified above. The fresh mixture shall be raked uniformly against the joint, and carefully compacted to ensure a good bond with the cold material.

The Contractor shall adjust any kerbs, gulley pots and chambers in accordance with final finished road level before laying the final wearing course.

1614A TOLERANCES

Add the following at the end of the second paragraph:

Passing sieves between 1.0 mm and 0.075 mm sieves	□ 3% (by total weight of dry aggregate including mineral filler)
Passing 0.075 mm sieve	□ 2% (by total weight of dry aggregate including mineral filler)

1615A ROAD REINFORCEMENT GRID

Where shown on the drawings or where directed by the Engineer, asphalt reinforcement in form of geotextile shall be used to reduce reflective cracking and/or to act as water barrier.

Paving geotextile reinforcement composite shall consist of 'ARMAPAL' reinforcement geosynthetic or similar approved. It shall meet the following physical requirements.

Property	Units	Requirements	Test method
Tensile strength	KN/m	50	SABS 02210 - 88
Elongation at break	%	<7	SABS 02210 - 88
Melting point	°c	260	ASTM D276
Bitumen Retention	l/m²	1.2	

Where the use of reinforcing for asphalt has been specified, the Contractor shall, at least three months before the material is to be used, submit samples of the type he/she intends to use, together with complete specifications of the material, load-strain relationship of the material, as well as the manufacturer's instructions for use, to the Engineer for approval. Where the material does not carry the mark of an acknowledged standards authority, the Engineer may instruct the Contractor to have the material tested by an approved laboratory and to submit the results**.**

1616A MEASUREMENT AND PAYMENT FOR ROAD REINFORCEMENT

Item: Geogrid reinforcement netting

Unit: square metres (m²)

The rate shall include for supplying, cutting, place in accordance with the manufacturer's specification, a geotextile reinforcement on the existing surfacing or new surface before laying the dense bitumen macadam or other overlay material. The rate shall include for tacking the material, with tack coat if required and any clout nails.

PART B - ASPHALT CONCRETE FOR SURFACING

1601B DEFINITION

The Asphalt concrete shall be SUPERPAVE (SUperior PERforming Asphalt PAVEment). Modifications to the Standard Specification have been made below to correspond with SHRP SUPERPAVE system recommendations on the design of Hot Mix Asphalt (HMA). The design of hot mixes shall be in accordance with the procedure detailed in Overseas Road Note 19- "A guide to the design of hot mix asphalt in tropical and subtropical countries" and MS2 – "Asphalt Mix Design Methods, 7th Edition by Asphalt Institute". The Contractor shall provide copies of ORN 19 and MS2 to the Engineer at the start of the Project. The salient features with reference to Standard Specification are summarized below

1602B MATERIALS FOR ASPHALT CONCRETE

a) **Penetration Grade Bitumen**

Delete Sub-Section (a) and replace with:

The bitumen shall be penetration grade, and shall meet the requirements of Table 4.3 in ORN 19 as summarized below

TEST	Test Method (ASTM)	Pen 40/50	Pen 60/70	Pen 80/100

Based on original bitumen penetration					
at 25^0C		D5	40-50	60-70	80-100
Softening point (°C)		D36	49-59	46-56	42-51
Flash point (°C)	Min	D92	232	232	219
Solubility in trichloroethylene (%)	Min	D 2042	99	99	99
TFOT heating for 5 hr at 163^0C		D 1754			
a) Loss by mass (%)	Max		0.5	0.5	0.5
b) Penetration (% of original)	Min	D5	58	54	50
c) Ductility at 25^0C	Min	D 113	-	50	75

The bitumen for asphalt concrete works shall be 60/70 penetration grade. The Contractor jointly with the Engineer shall carry out a minimum of five (5) bitumen affinity tests on each single size aggregate stockpiles to be used into the works and if any result is less than 95% coverage, then the binder shall be blended with **ColAmin** or similar approved adhesive additive as per manufacturer's instructions at 0.2 - 0.5% by mass of binder. The Contactor shall propose optimum dosage of the adhesive additive by carrying out bitumen affinity tests on the crushed aggregates for approval by the Engineer

b) **Aggregate**

The coarse aggregate shall be entirely crushed rock from a source which is known to give high values of stability (>9kN) in the Marshall test. Crushed river gravel shall not be used. Aggregates shall meet the requirements given in Table 16B-1(b) below (Extracted from ORN 19, Table 4.1)

Table 16 B-1(b) Requirements of Aggregate

Property	**Test**	**Property**
Cleanliness	Sand equivalent for 4.75mm fraction [1]	> 40
	Plasticity index for materials passing 0.425mm sieve [2]	<4
	Linear shrinkage for materials passing 0.425mm sieve, %	<2
Particle shape	Flakiness Index (FI) [3]	<25
Strength	Aggregate Crushing Value, (ACV) [4]	< 25
	Aggregate Impact Value, (AIV) [4]	<25
	10% FACT (dry) kN [4]	> 160
	Los Angeles Abrasion, (LAA) [5]	<30
Abrasion	Aggregate Abrasion Value [4]	< 14
Soundness [7] 5cycles	Sodium Sulphate Soundness (SSS) Coarse aggregate Sodium Sulphate Soundness (SSS) Fine aggregate	<10 <16 <15

% loss	Magnesium Sulphate Soundness (MSS) Coarse aggregate Magnesium Sulphate Soundness (MSS) Fine aggregate	<20
Polishing	Polished Stone Value	>57
Water absorption	Water absorption , % [6]	<2
Bitumen affinity	Immersion Mechanical Test: Index of retained Marshall stability ,% [8]	>75
	Static Immersion Test, % coating retained [9]	>95
	Retained Indirect Tensile Strength % at 7% VIM [10]	>79

1. AASHTO T176
2. British Standard 1377: Part 2
3. British Standard 812: Part 105
4. British Standard 812: Part 110 to 114
5. ASTM C131 and C 535
6. British Standard 812: Part 2
7.AASHTO T104
8. D Whiteoak (1990)
9.AASHTO T 182
10.AASHTO T 283

Fine aggregate (passing a 6.3mm sieve) shall consist of entirely crushed rock produced from stone having a Los Angeles Abrasion of not more than 40%

Aggregates for bituminous mixes shall be stored in single size in separate bins or on areas covered with tightly laid wood planks, sheet metal, hard compacted gravel, concrete or other hard and clean surfaces. The surface shall be self draining, and in such a manner that will preclude the inclusion of foreign material. Aggregates of different grades and sizes and from different sources shall be stored in separate piles, and if these piles are close together they shall be separated by bulk heads

1603B GRADING REQUIREMENTS

The grading of the mixture of coarse and fine aggregate shall be as per the particle size distribution for SUPERPAVE Gradation Requirements detailed under table 6.3 of MS2

For better workability of asphalt concrete designed to refusal density and for laying thickness of 50mm, the Maxirmum Aggregate Size (MAS) shall be limited to 19mm

The Contractor shall investigate number of gradings so that a workable mix, which also retains a minimum of 3% voids at refusal density, is identified. Restricted Zone boundaries shown under table 3.3 of MS2 shall be used as guidance towards identifying a such a grading

1604B REQUIREMENTS FOR ASPHALT CONCRETE

The mixture shall comply with the requirements given in table 6.5, MS2. Adopt 20-year ESAL (in millions) as 4.9

In addition, under Marshall Mix Design Criteria, the mixture shall comply with the requirements given in table 7.2, MS2

The proportion, by weight of total mixture, of bitumen shall be 4.5 - 6.0 % for 19mm MAS. This shall be termed the nominal binder content. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials.

In order to determine the suitability of a coarse aggregate source, a Marshall test programme shall be carried out. It will be advantageous to use crushed rock, which is known from past experience to give good results

Having established the suitability of the aggregate source several gradings shall be tested in the laboratory, including that used for the Marshall test. The blended grading shall include coarse, intermediate and fine grading that pass below the restricted zone, which shall increase the degree of interlock. For each mix, samples shall be made up to a range of bitumen contents at reducing interval of 0.25% from the nominal binder content and compacted using a gyratory compactor. Compaction to refusal shall be by vibratory hammer in accordance with the procedure described in BS 598 (Part 104: 1989), to establish relationships between bitumen content and VIM at refusal density for all the gradings

It should first be confirmed that compaction on one face of the sample gives the same refusal density as when the same compaction cycle is applied to both faces of the same sample. The procedure, which gives the highest density, must be used and shall be submitted to the Engineer for approval

From the above bitumen content - VIM @ refusal density relationship, it shall be possible to identify a bitumen content which corresponds to VIM of 3% for each grading.

To determine the workability of the mix, compaction trials should be undertaken in these gradings with designed binder content @ 3% VIM. It is advisable to establish two or more gradings for compaction trials

The compaction trials will identify a workable mix which can be made to a bitumen content which gives 3% VIM at refusal density and meeting the SUPERPAVE mixture requirements. The mixes identified in compaction trials should be manufactured to the laboratory design bitumen content and to two other bitumen contents. Cores will be cut to determine the density of the compacted material, this core will then be reheated to 145+/-5^{0}C in the appropriate mould and compacted to refusal using the vibrating hammer. To be acceptable the cores cut from the compaction trial must have a density equivalent to at least 95% of refusal density

The results of all the mix design options, laboratory and site trials for the adopted mix and the Contractor's recommendations are to be submitted to the Engineer for approval

1605B MIXING AND LAYING ASPHALT

The temperature of the bitumen and aggregates when mixed shall be 110+/-3^{0}C above the softening point (Ring and Ball) of the bitumen

Compaction should commence as soon as the mix can support the roller without undue displacement of material and with the temperature of the mix >120^{0}C, and completed before the temperature of the mix falls below 90^{0}C.

1606B COMPACTION

Rolling shall be continued until compaction of the completed layer attains a minimum mean value of 95% of refusal density (no value less than 93%) and until the voids measured in the compacted layer are within the specified range as appropriate

1608B SEALING BITUMINOUS SURFACE

After the wearing course has been trafficked and bitumen has hardened, the wearing course shall be sealed with class 2, 10/14 mm pre-coated chippings in accordance with Clause 1505C. The period of hardening will depend on the traffic level and should be such that the chippings will not become embedded in the wearing surface. The Contractor will propose and the Engineer will approve a section to be ready for sealing

PART C – DENSE BITUMEN MACADAM FOR BASE

1601C DEFINITION

Dense bitumen macadam produced from fresh materials shall comply with the "SUPERPAVE" requirements given in clauses 1602B, 1603B, 1604B, 1605B, 1606B and 1608B of these Special Specifications, except where modified below.

1603C REQUIREMENTS FOR DENSE BITUMEN MACADAM

The nominal binder content shall be 4.0 - 5.0 % for 37.5mm MAS. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials

For Marshall Mix Design Criteria, Modified Marshal Method for large aggregates shall be adopted as detailed under section 7.5 of MS2

The Maximum Aggregate Size (MAS) shall be limited to 37.5mm

SECTION 17 - CONCRETE WORKS

1703 MATERIALS FOR CONCRETE

All materials shall comply with the requirements of Section 1703 of the standard specifications.

Cement for all concrete works shall be CEM I, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 - Part 1, KS 1725: 2001 standards

1703 DESIGN OF CONCRETE MIXES

The following classes of concrete shall be designed and mix proportions approved for use as follows:

- Class 15/20 for all blinding to structures and precast pipe culvert beds and surrounds
- Class 25/20 for all culvert headwalls, wing walls, aprons, toe walls
- Class 30/20 for bridge all bridge members: abutments, piers, beams and deck

Specifications for construction materials and quality control shall be in accordance with the standard specifications.

1704 DESIGN OF CONCRETE MIXES

The following classes of concrete shall be designed and mix proportions approved for use as follows:

Blinding to all structures - Class 16/20

Culvert headwalls, Surround, wing walls, aprons, toe walls - Class 20/25

Pile caps, Abutments, Wing walls, Pier caps, bearing pedestal, Crash barrier, walkway on bridge, Approach Slab and Box Culverts - Class 30/37

Piles – Class 30/37

Bridge Piers, Girders and Deck – Class 35/45

Specifications for construction materials and quality control shall be in accordance with the standard specifications.

1713 FINISHES ON UNFORMED SURFACES

All unformed finishes shall be as follows:

(i) All unformed surfaces in contact with water or the eye shall be finished to class UF 3 Finish in accordance with the standard specifications

(ii) All unformed surfaces in contact with soil or on which asphaltic concrete is to be laid shall be finished to class UF 2 Finish in accordance with the standard specifications

The payment for such finishes shall paid in accordance with the standard specifications and as captured in the bills items.

1725 SURFACE FINISHES

All formed finishes shall be as follows:

(i) All formed finishes in contact with water or the eye shall be finished to class F3 finish in accordance with the standard specifications.

(ii) All formed surfaces in contact with soil shall be finished to class F 2 Finish in accordance with the standard specifications

The payment for such finishes shall paid in accordance with the standard specifications and as captured in the bills items.

1728 REINFORCEMENT FOR CONCRETE

All reinforcement to concrete shall be hot rolled high yield deformed bars complying with BS 4449 and steel mesh fabric to BS 4483

1741 MEASUREMENT AND PAYMENT

a) **Item: Concrete**

Amend clause 1741 (a) (iv) of standard specifications to read “class UF 3 finish”

b) **Item: formwork for formed surface finishes**

Amend the following to Clause 1741 (e) of the Standard Specification:

Unit m^2 of formwork shall cover inclined formwork of all slopes and angles.

1901. APPLICABLE STANDARDS.

The latest applicable corresponding standards shall be applicable in lieu of those indicated in the Standard Specifications. In particular the following standards shall be applicable:

a) Steel

EN 10021, EN 10025-1, EN 10025-2

EN 10025-3

EN 10025-4

EN 10029 EN 10034 EN 10051

EN 10056-2 EN 10163-1

EN 10163-2 EN 10163-3

EN 10204 BS 4-1

(b) Bolts, Anchor rods, Nuts and Washers

EN ISO 898-1

EN 20898-2

EN 14399-1, EN 14399-2

EN 14399-4

EN 14399-6

EN ISO 4017

EN ISO 4034, EN ISO 4032

DIN 7989-1

EN ISO 4026 DIN 976-1 DIN 125 DIN 529

(c) Galvanizing

EN ISO 1461, EN ISO 10684

(d) Elastomer

EN 1337-3

Structural bearings - Part 3: Elastomeric Bearings.

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 100m intervals along the boundary of the road reserve.

2003 EDGE MARKER POSTS

Edge marker posts shall be Verge Master MK 111 plastic posts manufactured by Glasdon Ltd. of Blackpool UK or equivalent approved by the Engineer. They 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.

The posts for the signs shall be cylindrical galvanised wrought iron tubes of minimum 75mm diameter and vandal-proofed by in-filling with concrete class 15/20.

The sign plates shall be made from approved metal or plastic sheet 3mm thick and vandal-proofed by the drilling of 3mm diameter holes at 100mm centres

The rate inserted for the signs shall include for all the costs of complying with this clause.

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 reflectorized hot applied thermoplastic material in accordance with Clause 219 of the Standard Specification complying to BS 3262 and BS 6088.

The rates inserted in the Bills of Quantities for road marking shall include for prior application of approved tack coat.

2006 GUARDRAILS

Guardrail posts shall be concrete 210 x 210 mm set vertically at least 1.2m into the shoulder as per the drawings and as directed by the Engineer.

Beams for guardrails shall be "Armco Flexbeam" or similar obtained from a manufacturer approved by the Engineer.

"Swareflex" ART 3240 or similar approved guardrail reflectors two way reflective one side red and another white shall be installed on the flex beams every 4m.

The rate inserted shall include for provision of the flex beams, posts, Swareflex reflectors, flex beam end bits and installation in accordance with the standard specifications and drawings.

2007 KERBS

(a) Vertical Joints

Vertical joints between adjacent kerbs shall not be greater than 5 mm in width and shall 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 KILOMETRE MARKER POSTS

Kilometre marker posts shall be provided as directed by the Engineer and in compliance with Standard Specification Clause 2008.

2011 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

2102 BRIDGE BEARINGS

Add the following

The bridge bearings shall be laminated elastomeric bearings to BS EN 1337-3

Structural bearings - Part 3: Elastomeric Bearings.

The contractor shall have the source of the bearings approved by Engineer and shall provide the engineer with a sample as shall be instructed for destructive testing. Upon importation of the bearings the engineer shall do random sampling for another sample for destructive testing to confirm the quality of the bearings to be used on the bridge.

The contractor shall make provision for the samples and their testing in his rates for other bearings since no separate payment shall be made for the test samples and their testing.

2105 GUARDRAILS TO BRIDGES

Delete and replace with the following:

The bridge crush barriers shall be of reinforced concrete as shown on drawings and shall be of the same concrete specification as for the concrete deck slab.

Their measurement and payment shall be in cubic metres under the relevant item under bill number 17.

2106 SURFACING TO BRIDGES

The surfacing to bridges shall consist of 50 mm thick Asphalt Concrete laid to the tolerances given in Section 3 of the Standard Specification.

SECTION 21A - MISCELLANEOUS BRIDGE WORKS-PILING

Add this as a subsection to Section 21.

2100 A.1 GENERAL

The following shall be taken into consideration in the piling works for bridges. The piling works shall be carried out in accordance with the provisions of BS 8004 or other approved code subject to the approval of the engineer. The piles shall be bored cast-in-place or as approved by the engineer.

2100 A. 2 BORED CAST-IN-PLACE PILES

Bored cast-in-place piles shall be formed by boring or grabbing and subsequently filling the hole with reinforced concrete. Piles diameters as shown on drawings shall be used.

Ready-mixed concrete shall be used with the approval of the engineer and shall be in accordance with BS 5328. The concrete shall be supplied in sufficient quantity to ensure that the concreting of each pile proceeds without interruption. In addition to meeting the strength requirements the concrete shall have adequate workability so that it can flow against the walls of the shaft, and into every cavity. The slump shall be as per the approved mix design. The minimum characteristic strength requirement at 28 days shall be 30 N/mm^2.

Table 14 — Suggested slump details for typical concreting situations for cast-in-place piles

Typical conditions of use	Slump	
	Range	
	mm	in
Poured into water-free unlined bore. Widely spaced reinforcement leaving ample room for free movement between bars	75 to 125	3 to 5
Where reinforcement is not spaced widely enough to give free movement between bars. Where cut-off level of concrete is within casing. Where pile diameter is less than 600 mm	100 to 175	4 to 7
Where concrete as placed by tremie under water or bentonite suspension	150 to collapse	6 to collapse

Generally the concrete shall contain not less than 300 kg/m^3 cement. To avoid segregation, honeycombing and bleeding, and other defects resulting from the high water content required for workability, the use of a water reducing/plasticizing admixture shall be used upon the approval of the engineer. However, to ensure the required cohesion of the mix the fines content of cement or aggregate shall also have to be increased subject to the approval of the engineer.

The engineer shall have access for inspection to the supplier's works at all times.

The reinforcement shall be carried down for the full length of the piles using approved method. Spacer rollers shall be attached to the reinforcement cage to ensure cover to reinforcement.

2100 A. 3 PILE LOAD TESTING USING MAINTAINED LOADS AND SETTLEMENT MEASUREMENT

Working piles shall be tested as instructed by the engineer. At least one working pile shall be tested for every foundation location. In testing the following shall be ensured.

i) ***Preparation.*** The pile head shall be cut off or built up to the necessary elevation and shall be capped appropriately to produce a bearing surface perpendicular to the axis of the pile. The arrangement shall be such that none of the test load is carried by the ground under the cap.

ii) Method of loading. The test load may be applied in one of the following ways or any other approved by the engineer:

a) by means of a jack which obtains its reaction from kentledge heavier than the required test load;

b) by means of a jack which obtains its reaction from tension piles or other suitable anchors.

The load shall be measured by a calibrated load gauge and also by a calibrated pressure gauge in the hydraulic system. The jack and load guage shall be carefully aligned so that the load applied is co-axial with the pile.

When using method a) care shall be taken to ensure that the centre of gravity of the kentledge is on the axis of the pile. The nearest edge of the crib supporting the kentledge stack shall not be closer than 1.3 m to the surface of the test pile. Kentledge shall not be used for tests of raking piles. In appropriate circumstances an existing structure of adequate mass and suitable construction may be used as kentledge.

When using method b) all anchor piles shall be at a distance of at least three test pile shaft diameters from the test pile, centre to centre, and in no case less than 2 m. This spacing may need increasing in certain situations where knowledge of the absolute value of settlement of an individual pile is essential.

Where a pile to be tested has an enlarged base the same criterion should apply with regard to the shaft and, in addition, the surfaces of anchor pile shafts shall not be closer than one-half of the diameter of the enlarged base to the test pile base. If the anchor piles are to be permanent working piles, their level should be observed during application of the test load to ensure there is no residual uplift. Where ground anchors are employed with method b), no part of the anchor transferring load to the ground shall be closer to the test pile than 3 test pile shaft diameters.

Where the pile to be tested has an enlarged base this criterion shall apply with regard to the pile shaft and, in addition, no section of the anchor-transferring load to the ground should be closer to the pile base than the base diameter.

iii) Measurement of settlement.

Settlement shall be measured by one of the following four methods.

a) ***Level and staff***. The level and the scale of the staff shall be chosen to enable readings to be made to an accuracy of 0.5 mm. A scale attached to the pile or pile cap may be used instead of a levelling staff. A datum shall be established on a permanent object or other well-founded structure or deep datum point. The datum shall be situated so that only one setting up of the level is needed. It is preferable that the datum shall be duplicated in case one is inadvertently demolished. The datum shall not be affected by the test loading or other operations on the site.

b) ***Reference frame.*** A frame shall be supported on two foundations or stakes placed sufficiently far from the pile and the reaction system as to be unaffected by ground movements resulting from the test; the distance shall be not less than 3 test pile diameters and in no case less than 2 m.

The foundations or stakes shall be placed at a sufficient depth below ground to be unaffected by movements of the reaction system and movements of the ground caused by moisture changes or frost. The measurement of settlement is made by dial gauges fixed to the frame and bearing on the top of the pile, or lugs or other reference points on the pile to register the movement of the pile. If preferred the gauges may be fixed to the pile and bear on surfaces on the reference frame. Electrical displacement transducers can be used in place of dial gauges. Readings should be taken to an accuracy of 0.1 mm. During the test, observation of any movements of the stakes with reference to a datum as in a) above shall be made by means of a level and staff.

c) ***Reference wire.*** A strained high tensile wire may be used instead of the reference frame. The wire is positioned against a scale fixed to the pile and the movement of the scale relative to the wire is determined. Readings shall be taken to an accuracy of 0.5 mm.

d) ***Electro-optic position sensing***. A laser beam focused by a lens attached to the pile may be used to produce an image on a photoelectric detector. Movement of the pile produces an electrical signal proportional to the movement. The foundations for the laser and detector units shall be as described under b) above but it is convenient and likely to lead to greater accuracy if they are placed at least 10 test pile diameters from the test pile.

Where method b) or c) is used, protection of the frame or wire from sun and wind shall be made and variations in the air temperature shall be recorded.

Loading Procedure. The engineer shall state the working load and prescribe the stages of loading. It shall be convenient to make the increments of load about 25 % of the working load up to the working load, and appropriately smaller thereafter as shall be determined by Engineer. Each load increment shall be sustained for at least 15 minutes and readings taken. The pile shall be unloaded and reloaded after the completion of any stage of loading. The reloading shall be at least 1.5 times the working load and shall be sustained for at least 20 hours with readings being taken as appropriate but at least every 60 minutes. Three readings shall be taken for each load increment at intervals of 5 minutes in both cases before another increment is done.

During unloading, readings of time and settlement should be made at suitable intervals and, after removal of the load, readings shall be continued until the movement effectively ceases.

On completion of the necessary stages of loading a pair of graphs showing load and settlement versus time as abscissa shall be plotted as indicated in Figure 15(a). A graph of load versus the settlement at the end of each stage of loading shall be plotted as in Figure 15(b). These shall form integral part of the report to be produced on the works.

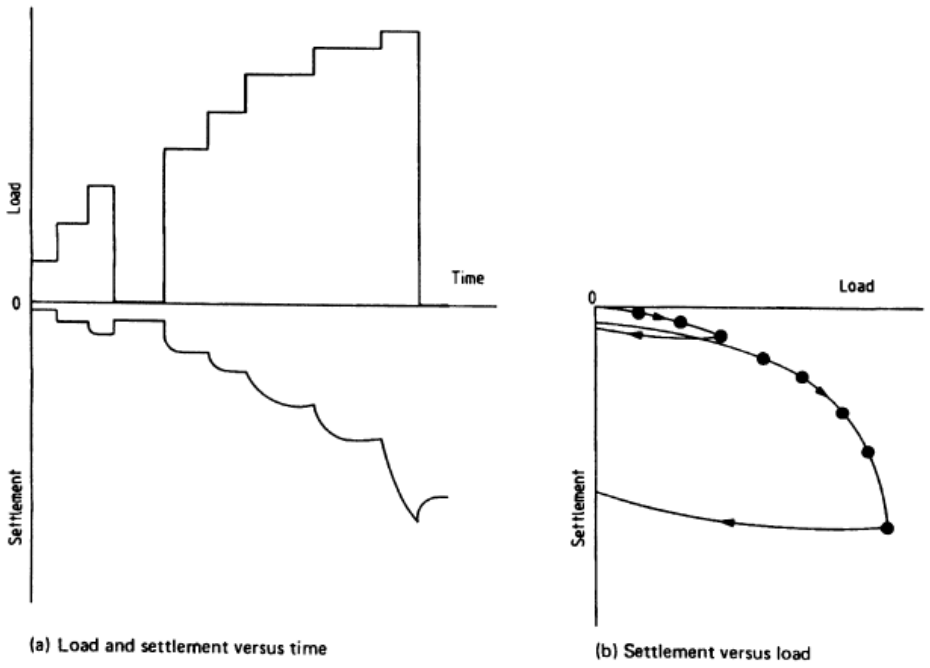


Figure 15 — Relationship of load, settlement and time in pile loading test using maintained loads

21A. 4 PILE INTEGRITY TESTING

All piles shall be subjected to pile integrity testing using an approved method subject to the approval of the engineer. An expert firm approved by the engineer shall do the pile integrity testing and a comprehensive report shall be produced.

2202 MEASUREMENTS AND PAYMENT

(a) Plant

Where items of major plant listed in the schedule of Dayworks 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 Dayworks that has a power rating lower than specified above shall be paid for at rates lower than those in the schedule of Dayworks. The reduction in the rate payable shall be in proportion to the reduction in power rating below that specified above.

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.

2502 INTERPRETATION AND DOCUMENTATION

The following documents shall inter-alia be read in conjunction with this specification:

- The Instructions to Bidders;
- The Conditions of Contract;
- The Drawings;

2503 GENERAL REQUIREMENTS

(a) HIV/AIDS Awareness Campaign

The Contractor shall institute an HIV/AIDS awareness campaign amongst his workers for the duration of the contract. 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 shall be supplied by the Employer through the Engineer before the posters are printed.

Aids awareness shall also be included in the orientation process of all workers employed on the contract.

(b) AIDS Prevention Campaign

The Contractor shall institute an HIV/AIDS prevention campaign amongst his workers for the duration of the contract. As part of the campaign the Contractor will be required to make condoms available to workers. The condoms shall be from an approved manufacturer and comply with the current ISO Standards or WHO/UNAIDS Specifications and Guidelines for Condoms, 1998, or any more recent publication. The Contractor shall make available at least 4,000 condoms every month, through dispensing machines or other approved method of distribution. The Contractor shall at all times keep the site adequately supplied with condoms.

(c) HIV/AIDS Training

Introduction

HIV/AIDS is having a significant and increasing impact in Kenya. Interventions that stimulate the movement of people increase both the exposure to the HIV virus and the spread of the virus. Road construction has been identified as one such intervention.

KeNHA policy is to integrate HIV/AIDS awareness and prevention into all road construction and rehabilitation programmes. This is in accordance with the Third National Strategic Plan (2000-5) for HIV/AIDS prevention and control as approved by the Government of Kenya, International Bank for Reconstruction and Development (IBRD) and other organisations.

The project will involve both local labour and other contractor's labour. It is a contractual requirement for the Contractor to carry out HIV/AIDS awareness and prevention activities during the construction period as stipulated in this specification.

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.

Scope of activities

Activities for HIV/AIDS awareness 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 50 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 bill boards to raise awareness of the integration of construction and HIV/AIDS activities.

(viii) Inclusion of HIV/AIDS activities at site meetings with the District Aids Committee and other approved representatives.

(ix) Availability of promotional materials such as T-shirts, caps, bumper stickers, key rings, etc.

The scope of activities may be tailored as required to meet the perceived needs and priorities of the labourers, and should involve participatory approaches to ensure that they are appropriate and have a public health impact. The scale and frequency of activities may also be adjusted to suit requirements of the target group. Education will cover:

(a) preventive behaviors including partner reduction, condom use, awareness and appreciation of the importance of treatment of sexually transmitted infections (STls);

(b) skills including negotiating safer sex, correct condom use, purchase of condoms without embarrassment; and

(c) referral to local health centres and available services.

Tasks to be undertaken to support the above activities include:

(a) 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.

(b) Carrying out a brief review of regional activities combining road construction with HIV/AIDS campaigns to determine options, best practice key issues, constraints, etc.

(c) Reviewing of Information, Education and Communication (IEC) materials available and their relevance to road construction, making recommendations for future development of IEC materials.

(d) Providing education and training for site personnel, supervisors and peer educators for the scope of activities as above.

(e) 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.

(f) Providing mechanisms for the social marketing of condoms and distribution of materials.

(g) 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 recognising the limitations due to the short time-frame to show behaviour change. The KAP will be supported by qualitative information from focus group discussions.

Collaboration

HIV/AIDS activities are co-ordinated nationally by the National Aids Control Council (NACC). KeNHA, in consultation with NACC and the Ministry of Health (MOH), will co-ordinate with the provincial, district and local representatives. Representatives of local health authorities will be invited to attend training and communication activities.

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 minimising duplication. In addition, these links will ensure that the target group will have access to continued information after the end of the construction period.

Contractor Responsibilities

The Contractor will employ and designate a qualified HIV/AIDS expert fulltime, to be approved by the Engineer, who will work closely with the Client, MOH and other implementing agencies to support the HIV/AIDS awareness and prevention activities. This will ensure maximum effectiveness and integration with construction activities. Specific, but not exclusive, issues to be addressed by the Contractor are:

(i) Scheduling appropriate timing and durations of the implementation of HIV/AIDS activities as part of work plan for labourers and supervisors. Designated rest times such as lunch breaks and pay days should be excluded.

(ii) Identification of suitable individuals from recruitment records for education with the implementing organization.

(iii) Provision of suitable sites for communication activities and for condom distribution.

(iv) Monitoring of the implementation of peer educator activities.

(v) Provision of support as necessary to the implementing organization.

Inputs

An organization experienced in the provision of HIV/AIDS awareness and prevention activities will be selected as a subcontractor to provide the above scope of activities on behalf of the main Contractor.

Reporting

The implementing organization will produce the following reports to be submitted to the Contractor, The Engineer, KeNHA and NACC:

- monthly progress briefs for inclusion in site meetings.
- quarterly reports detailing activities carried out, issues, follow up, etc.
- a review report of activities in the road construction sector,
- a review report of existing IEC materials with recommendations for development of materials specifically for the road sector.
- a final report detailing the methodology and activities carried out under this project including lessons learnt, impact, liaison with the Contractor and other parties, etc.

In addition, a report with the recommended approach for integration of HIV/AIDS awareness and prevention activities in the road construction sector will be produced. This will be a synthesis of project activities including contractual approaches, communication activities, availability of materials, liaison with existing organisations, etc. It will be developed with all parties involved in the construction activities to ensure the wide range of views and experiences is gained.

The final report and recommended approach will be presented to KURA, NACC and other interested organisations including private sector, funding agencies and NGO's.

Timing

Activities shall commence at the start of the construction period and continue through-out the 24 months to ensure a sustained impact. Reporting and dissemination activities shall continue for three months after the project is completed to ensure integration into current practice.

2504 MEASUREMENT AND PAYMENT

The payment items in this clause shall include full compensation for all work associated with the provision of HIV/AIDS related services as specified.

Item: Instituting an HIV/AIDS awareness and prevention campaign

Unit: months

The unit of measurement shall be the calendar month or part thereof, measured over the duration of the campaign. The tendered rate shall include full compensation for equipment, labour, materials including the procurement and distribution of condoms and full compensation for transport, meals, accommodation and any other reasonable allowances for the Participation of local health authorities, provincial director of health and NACC and other resources required for the provision of the service in compliance with clause 2503 (a) & (b) above.

Item: Instituting an HIV/AIDS Training – Engagement of specialist HIV/AIDS sub-contractor

Unit: Provisional Sum

Compensation for HIV/AIDS Specialists and resources for the implementation of Clause 2503(c). Any amount required under this item will be paid as per the programme approved by the Engineer and the Client (KeNHA) prior to expenditure.

SECTION VIII - DRAWINGS

Standard Drawings

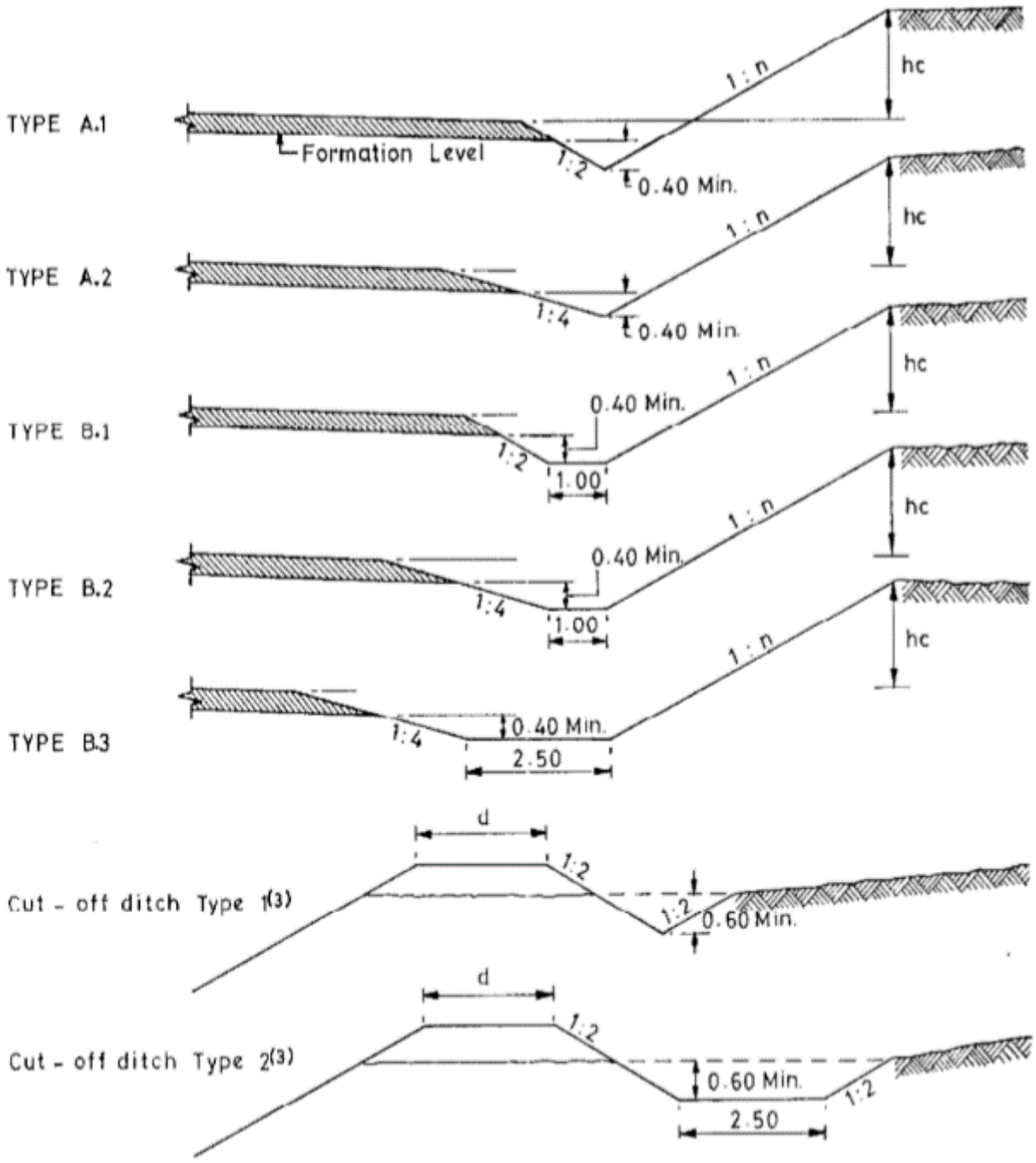
Project Specific Drawings

Line Diagrams

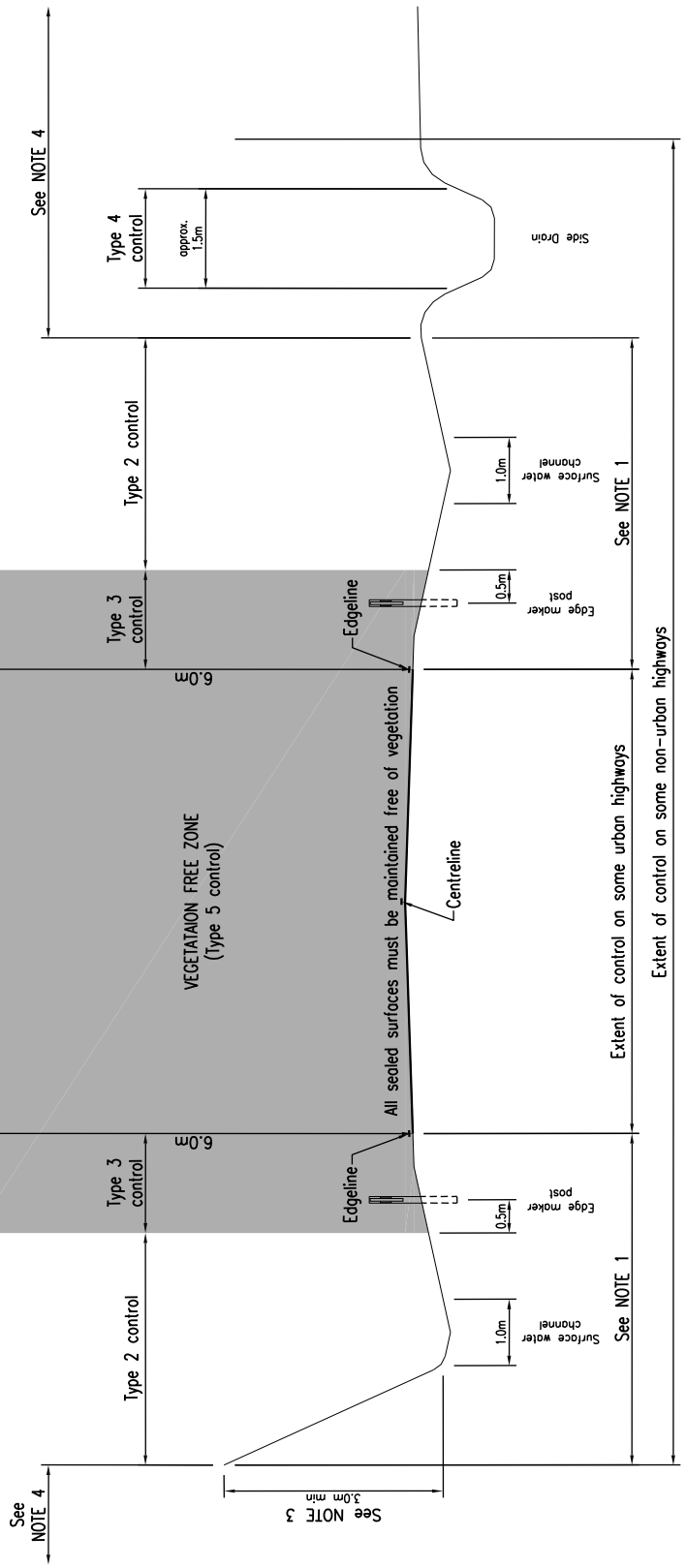
Road Condition Survey (ARICS)

STANDARD DRAWINGS

SIDE DITCHES AND CUT OFF DITCHES


TYPE A.1
Formation Level
1:2
0.40 Min.
1:n
hc
TYPE A.2
1:4
0.40 Min.
1:n
hc
TYPE B.1
0.40 Min.
1:2
1.00
1:n
hc
TYPE B.2
0.40 Min.
1:4
1.00
1:n
hc
TYPE B.3
1:4
0.40 Min.
2.50
1:n
hc
Cut - off ditch Type 1(3)
d
1:2
1:2
0.60 Min.
Cut - off ditch Type 2(3)
d
1:2
0.60 Min.
2.50
1:2

EXTENT AND TYPE OF VEGETATION CONTROL

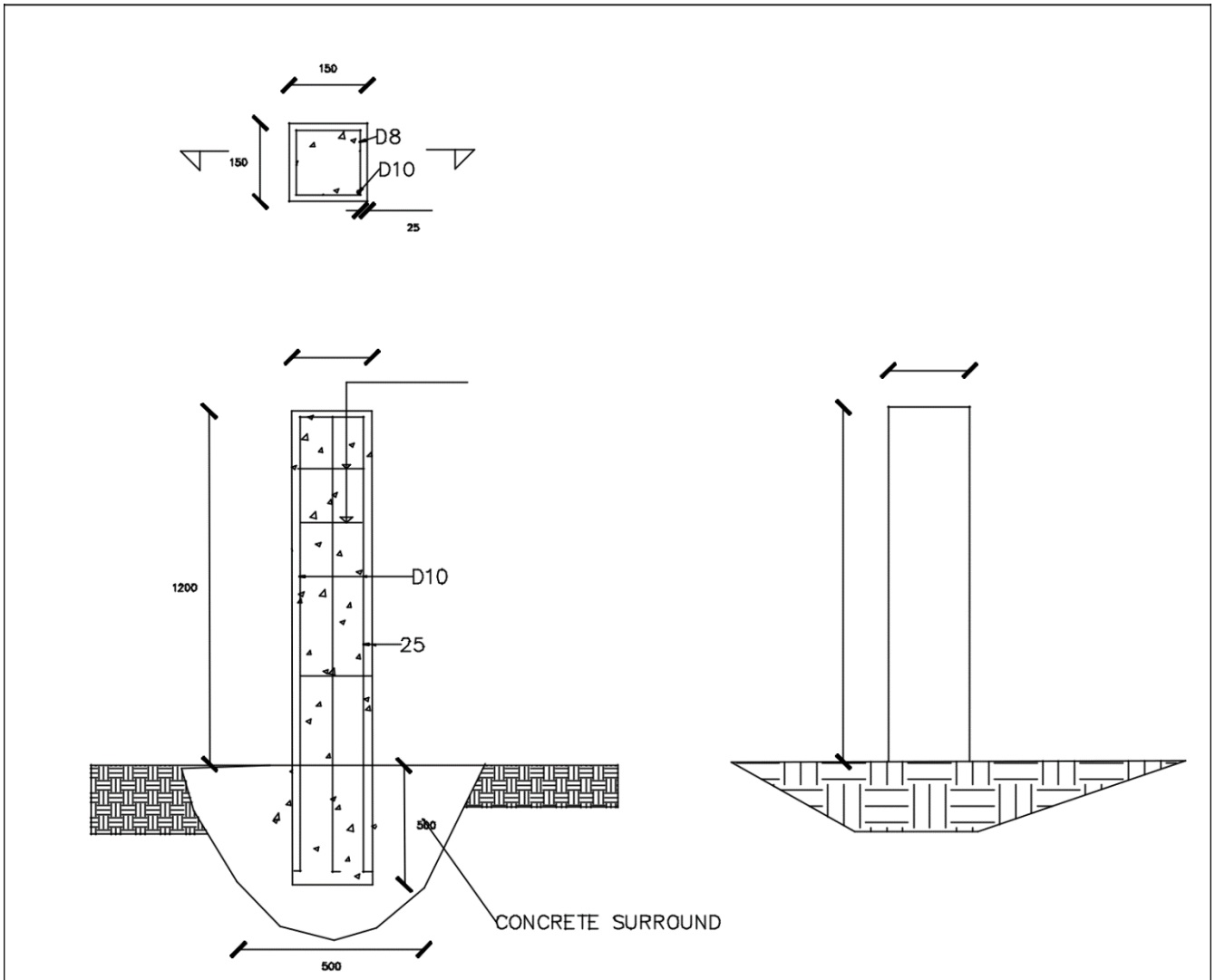


NOTE 1 this distance must be a minimum of 3.0m on straights and on the outside of curves and a minimum of 5.0m on the inside of curves.

NOTE 2 Vegetation free zone must be maintained free of all vegetation.

NOTE 3 A minimum of 3m to be maintained on the cuts up, and 2m on slope down.

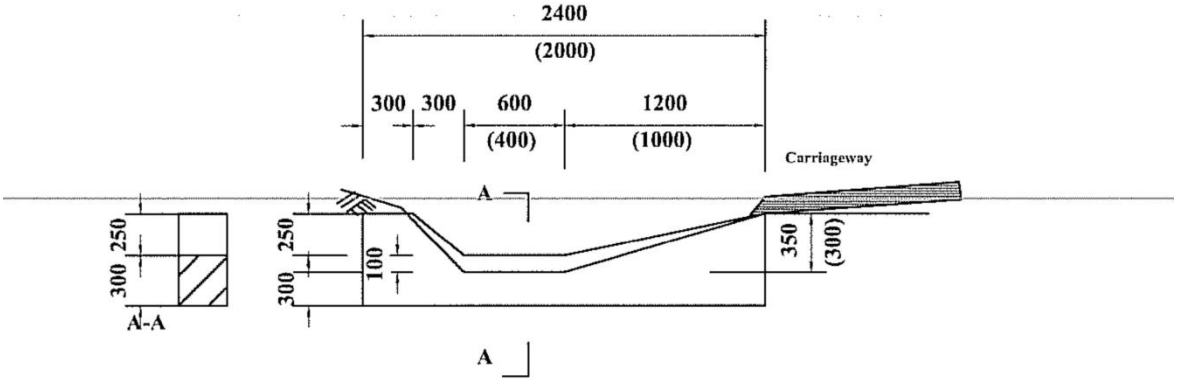
NOTE 4 These areas must be maintained according to the local requirements



EDGE MARKER POST	NOTES: 1 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED 2 USE FIGURED DIMENSIONS 3 THE POST TO BE PAINTED IN WHITE

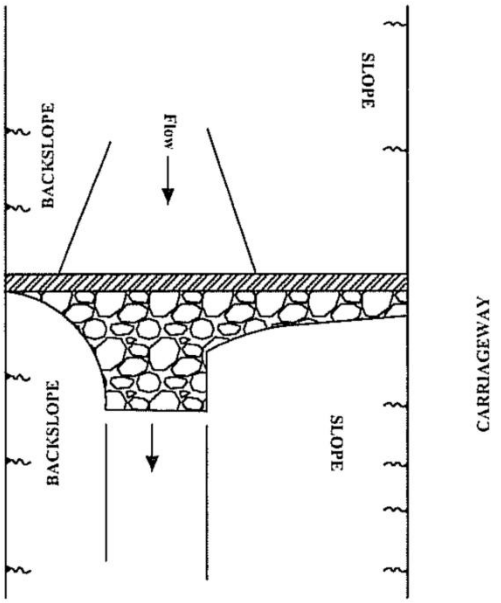
KILOMETER MARKER POST
NOTES:
1 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
2 USE FIGURED DIMENSIONS
3 THE ANGLE LINE AND THE PLATE TO BE PAINTED BLACK
4 THE WRITING MUST BE REFLECTIVE WHITE STICKER OR PAINT ON BOTH SIDES OF THE PLATE
600
N R K
11
30
500
140
270
150
500
B-B
770
150
300
50
500
A-A
DETAIL C
100X60X2 MM PLATE FILLET WELDED ON THE ANGLE LINE
FILLET WELD THE PLATE TO THE 75X75X2 MM ANGLE LINE
WRITING SHALL BE ON BOTH SIDES OF THE STEEL PLATE
A
B
PLAN

CONCRETE SCOUR CHECKS



SECTION OF CONCRETE SCOUR CHECK

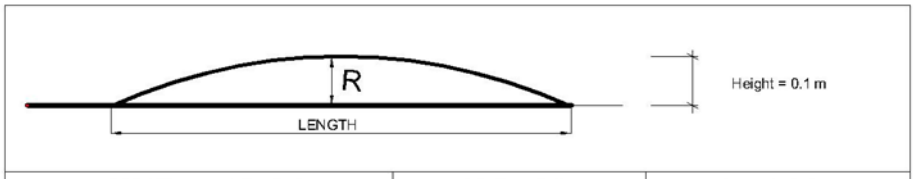
NOTE
1.Dimensions in mm



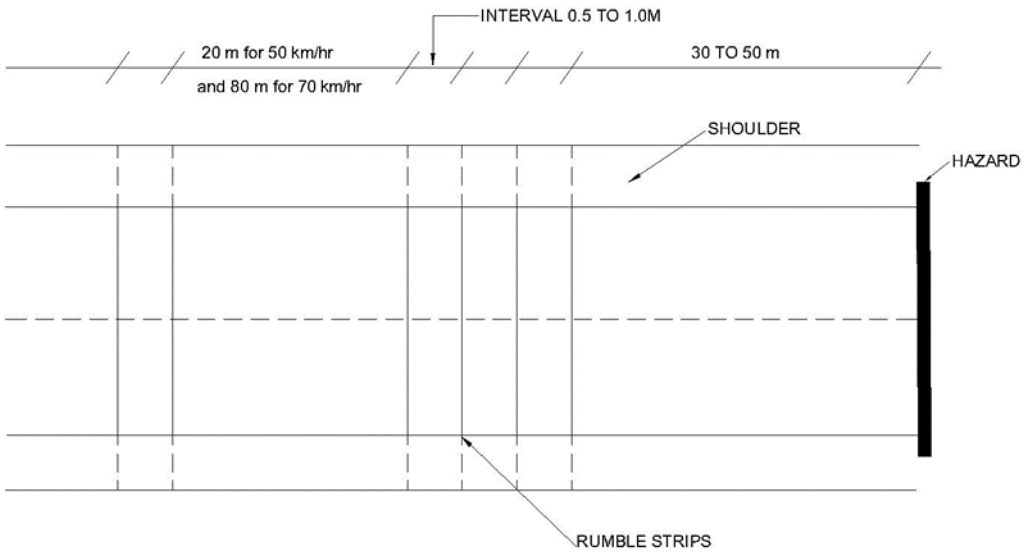
PLAN OF DRAIN WITH SCOUR CHECK

Cross-Section	Sizes in mm			Excav (m3)	Concrete (m3)	Apron stone pitching (m3)
	Length	Width	Depth			
A	2400	100	550	0.13	0.15	0.18
B	2000	100	500	0.10	0.09	0.14

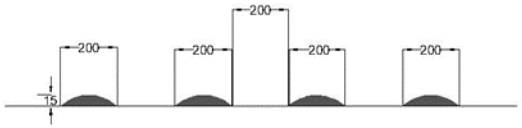
DETAILED DESIGN OF CIRCULAR SPEED HUMP



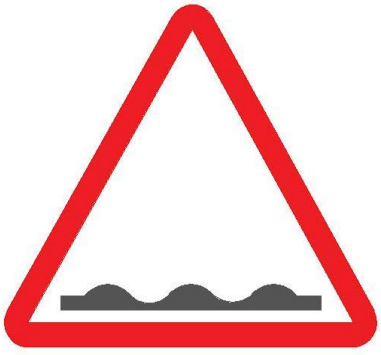
Vehicle speed (km/hr)	Radius (m)	Length (m)
20	11	3.0
25	15	3.5
30	20	4.0
35	31	5.0
40	53	6.5
45	80	8.0
50	113	9.5
55	180	12.0



RUMBLE STRIPS DESIGN

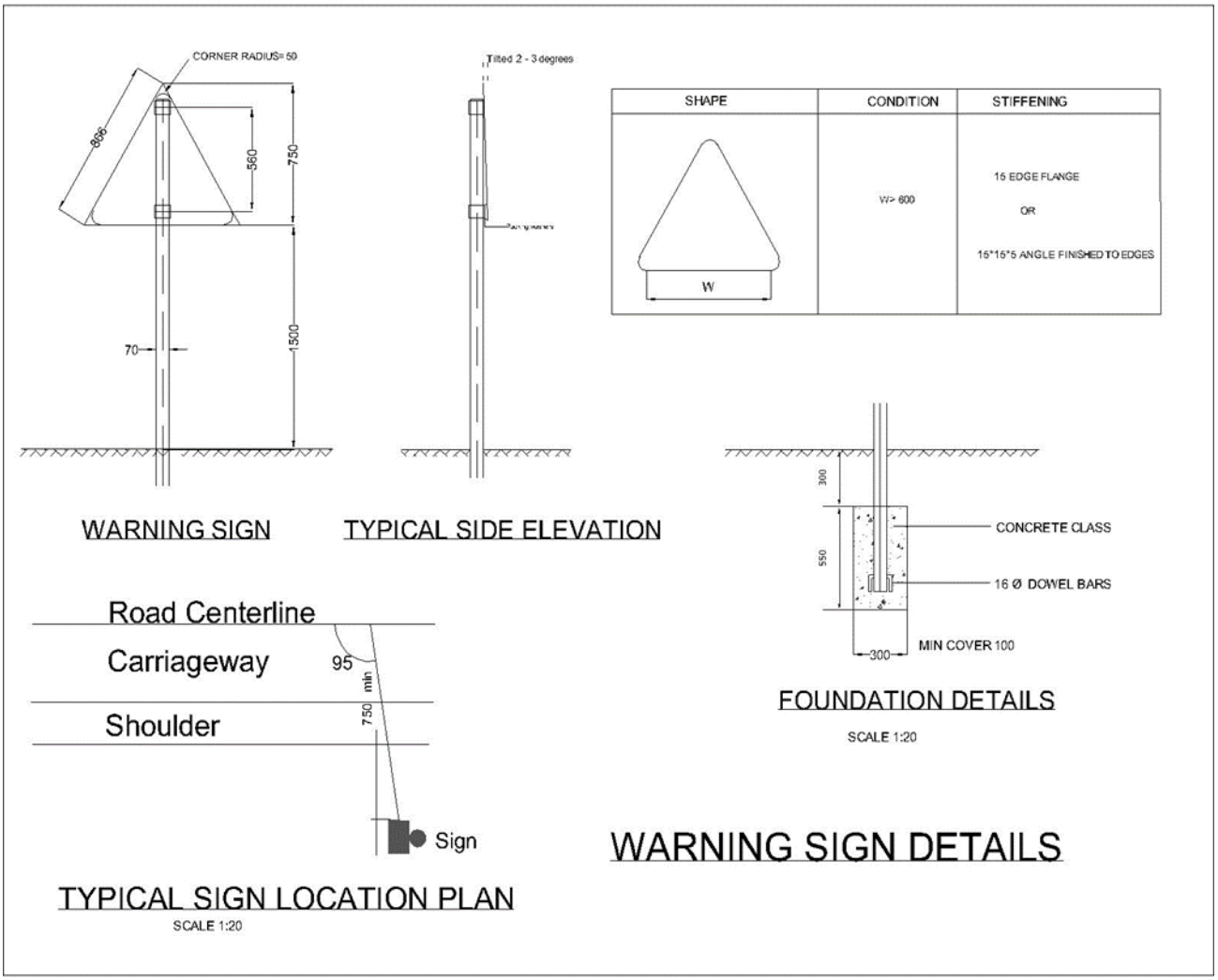


CROSS SECTION OF RUMBLE STRIPS



Rumble Strip Sign

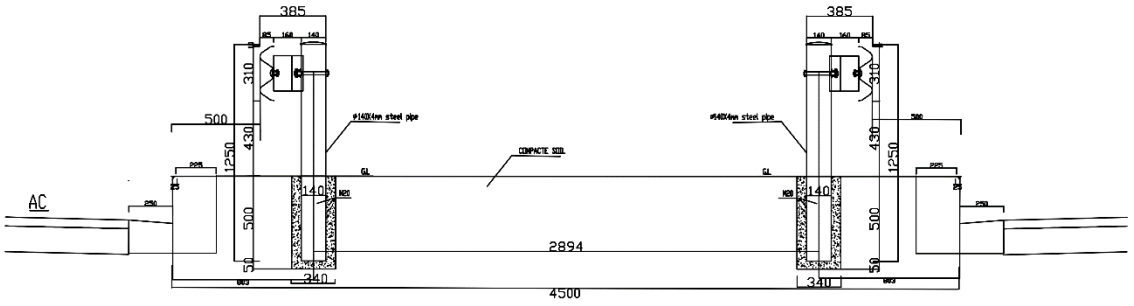
Hump ahead sign


CORNER RADIUS= 50
886
560
750
70
1500
Tilted 2 - 3 degrees
SHAPE
CONDITION
STIFFENING
W
W> 600
15 EDGE FLANGE
OR
15*15*5 ANGLE FINISHED TO EDGES
WARNING SIGN
TYPICAL SIDE ELEVATION
300
550
CONCRETE CLASS
16 Ø DOWEL BARS
300
MIN COVER 100
FOUNDATION DETAILS
SCALE 1:20
Road Centerline
Carriageway
Shoulder
95
750 min
Sign
TYPICAL SIGN LOCATION PLAN
SCALE 1:20
WARNING SIGN DETAILS

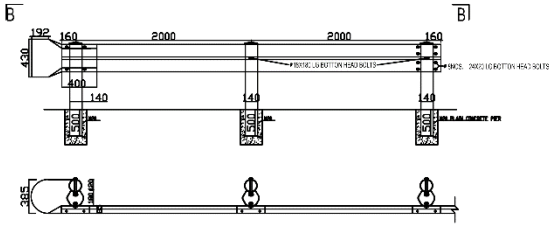
PUBLICITY SIGN

KeNHA
Kenya National
Highways Authority
www.kenha.co.ke
PERFORMANCE BASED CONTRACT FOR THE MAINTENANCE OF JCT A1 (CHAVAKALI) - JCT B12 (CHEPSONOI) (B128) ROAD
CONTRACT NO:
FUNDED BY:
GOVERNMENT OF KENYA FUEL LEVY FUND
EMPLOYER:
DIRECTOR GENERAL (KeNHA)
OVERALL RESPONSIBILITY:
DIRECTOR, MAINTENANCE
SUPERVISION:
REGIONAL DIRECTOR (WESTERN REGION)
CONTRACTOR:
M/S
P. O. BOX
For more information Please Contact
The Director General
Kenya National Highways Authority
P.O. Box: 49712 - 00100 Nairobi
Tel: 020-6013842
Email: info@kenha.co.ke

DRAWING FOR GUARDRAIL



GUARDRAILS ELEVATION



PLAN-B

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION IX

CONDITIONS OF CONTRACT, PART I -GENERAL CONDITIONS

SECTION VIII CONDITIONS OF CONTRACT PART I: GENERAL CONDITIONS OF CONTRACT

Red Book:

© FIDIC 1999. All rights reserved.

The Conditions of Contract are the "General Conditions" which form part of the "Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer ("Red book") First Edition 1999" published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC) and the following "Particular Conditions" which comprise of the amendments and additions to such General Conditions.

An original copy of the above FIDIC publication i.e. "*Conditions of Contract for Building and Engineering Works Designed by the Employer*" must be obtained from FIDIC.

International Federation of Consulting Engineers (FIDIC)

FIDIC Bookshop – Box- 311 – CH – 1215 Geneva 15 Switzerland		
Fax	:	+41 22 799 49 054
Telephone	:	+41 22 799 49 01
Email	:	fidic@fidic.org
www.fidic.orghttp://www.fidic.org/		
FIDIC code: ISBN 2 – 88432 – 022 - 9		

SECTION X CONDITIONS OF CONTRACT, PART II -CONDITIONS OF PARTICULAR APPLICATION

SECTION IX: CONDITIONS OF CONTRACT PART II: (CONDITIONS OF PARTICULAR APPLICATION)

The following Special Provisions shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The Particular Condition is preceded by the corresponding clause number of the General Condition of Contract to which it relates.

TABLE OF CONTENTS

SECTION I INVITATION TO TENDER **4**
PART 1 TENDERING PROCEDURES **9**
SECTION II - INSTRUCTIONS TO TENDERERS 10
SECTION III - TENDER DATA SHEET (TDS) 30
SECTION IV- EVALUATION AND QUALIFICATION CRITERIA 34
SECTION V - TENDERING FORMS 59
FORM ELI-1.1- TENDERER INFORMATION FORM 60
FORM ELI- 1.2- TENDERER JV INFORMATION 61
FORM ELI - 1.3- QUALIFICATION OF FOREIGN CONTRACTORS 62
FORM ELI - 1.4- DECLARATIONS OF MATERIALS, EQUIPMENT AND LABOUR SOURCES 65
FORM OF TENDER 67
FORM CON – 1 HISTORICAL CONTRACT NON-PERFORMANCE, PENDING LITIGATION AND LITIGATION HISTORY 88
FORM CON – 2: DECLARATION FORM – FAIR EMPLOYMENT LAW AND PRACTICES 90
FORM CON – 3: CERTIFICATE OF BIDDER'S VISIT TO SITE 91
FORM FIN – 3.1: FINANCIAL SITUATION AND PERFORMANCE 92
FORM FIN – 3.2: AVERAGE ANNUAL CONSTRUCTION TURNOVER 96
FORM FIN - 3.3: CURRENT CONTRACT COMMITMENTS / WORKS IN PROGRESS 97
FORM EXP - 4.1: GENERAL CONSTRUCTION EXPERIENCE 98
FORM EXP - 4.2(A): SPECIFIC CONSTRUCTION AND CONTRACT MANAGEMENT EXPERIENCE 99
FORM EXP - 4.2(B): CONSTRUCTION EXPERIENCE IN KEY ACTIVITIES 10
0
TECHNICAL PROPOSAL 10
2
FORM OF TENDER SECURITY - DEMAND GUARANTEE 13
1
PART 2 - WORKS' REQUIREMENTS **132**
SECTION VI - BILLS OF QUANTITIES 133

SECTION VII - SPECIFICATIONS 169
SECTION VIII - DRAWINGS 240
PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS 253
SECTION IX CONDITIONS OF CONTRACT, PART I -GENERAL CONDITIONS 254
SECTION X CONDITIONS OF CONTRACT, PART II -CONDITIONS OF PARTICULAR APPLICATION 256
SECTION XI - CONTRACT FORMS 267
FORM NO. I - NOTIFICATION OF INTENTION TO AWARD 268
FORM NO. 2 - NOTIFICATION OF AWARD 270
FORM NO. 3 – CONTRACT AGREEMENT 271
FORM NO. 4 - PERFORMANCE SECURITY 272
FORM NO. 6 - ADVANCE PAYMENT SECURITY 273
FORM NO. 7 - RETENTION MONEY SECURITY 275
FORM NO. 8 BENEFICIAL OWNERSHIP DISCLOSURE FORM 276

1 SUB-CLAUSE 1.1: DEFINITIONS

Amend these sub-clause as follows:

1.1.1.3 Amend the paragraph by adding the following: Letter of Acceptance is synonymous with Notification of Award.

1.1.1.4: Amend the paragraph by adding the following words at the end: The words Letter of Tender is synonymous with Form of Tender.

1.1.1.7: Insert in line 4 after the prices", the following, "entered by the Contractor (whether or not such rate be employed in computation of the Accepted Contract Amount),"

1.1.1.8: Amend the paragraph by adding the following words at the end:

The word "Tender" is synonymous with "bid"

1.1.1.9 Amend the paragraph by adding the following words at the end: The words Appendix to Tender or Appendix to Form of Tender is synonymous with Contract Data.

1.1.2.5 Amend the paragraph by adding the following words at the end: The words Contractor's representative is synonymous with Site Agent or Road Manager.

2 SUB-CLAUSE 1.4: LANGUAGE AND LAW

Insert:

The Contract shall be drawn up in the ENGLISH LANGUAGE. Communication between both Parties shall be in this given language.

The Laws applicable to this Contract shall be the Laws of the Republic of Kenya.

SUB-CLAUSE 1.5: PRIORITY OF DOCUMENTS

Delete the documents listed (a) – (h) and substitute with the following:

a) The Contract Agreement (if completed)
b) The Letter of Acceptance
c) The Form of Tender
d) Appendix to Form of Tender
e) The Particular Conditions
f) These General Conditions
g) The Special Specifications
h) The Standard Specification for Road and Bridge Construction, 1986
i) The PBC Guidelines Edition 1.1 of February 2016
j) Road Maintenance Manual, May 2010 Edition and Performance Based Contract Manuals.
k) The Drawings;
l) The priced Bills of Quantities
m) Other documents forming part of the Contract

SUB-CLAUSE 1.6: CONTRACT AGREEMENT

Replace the first sentence of the first paragraph with:

The parties shall sign a Contract Agreement within the period stipulated in the Appendix to Tender.

3 SUB-CLAUSE 3.1: ENGINEER'S DUTIES AND AUTHORITY

With reference to Sub-Clause 3.1, the following shall also apply:

The Engineer shall obtain the specific approval of the Employer before taking any of the following actions:

d) Consenting to the subcontracting of any part of the works under Clause 4.4

e) Determining an extension of time under Sub-clause 8.4

f) Certifying additional cost determined under Clause 12

g) Issuing a Variation under Clause 13

4 SUB-CLAUSE 4.2: PERFORMANCE SECURITY

Replace the text of the first and second Paragraph under Sub-clause 4.2 with the following:

"The Contractor shall provide the Performance Security to the Employer 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 Tender. The Performance Security shall be issued by a bank incorporated in Kenya. The Contractor shall notify the Engineer when providing the Performance Security to the Employer.

Replace the text of the first sentence under the third paragraph under Sub-clause 4.2 with the following:

The Contractor shall ensure that the Performance Security is valid and enforceable until a date 28 days after the date of issue of the Performance Certificate.

5 Add the following after the fifth paragraph:

The Employer shall be at liberty to claim part or the entire performance Security without informing or notifying the Contractor provided that the conditions necessitating the claim are contractual.

SUB-CLAUSE 4.3: CONTRACTOR'S REPRESENTATIVE

Add the following at the end of the second paragraph:

The Contractor's Agent or Representative on the site shall have a minimum qualification of a Registered Professional Engineer (Highways), BSc in Civil Engineering, have a Current / Valid Registration by EBK and shall be able to read and write English fluently.

The Contractor shall also submit a specimen signature of his proposed Site Agent /Road Manager who **SHALL** be the only signatory to payment of certificates/Monthly statements from the Contractor.

6 SUB-CLAUSE 4.4: SUBCONTRACTORS

Add after paragraph one the following:

The maximum allowable accumulated value of work subcontracted shall be as stated in the appendix to form of tender.

7 SUB-CLAUSE 4.8: SAFETY PROCEDURES

Add:

Notwithstanding the Contractor's obligation under Sub-Clause-paragraph (a) – (g) of Sub-Clause 4.8 of the Conditions of Contract, the Contractor shall observe the following measures with a view to enhance Road Safety to the Road Users and Site Workers:

1. Prepare and submit a comprehensive Road Safety Implementation Plan within 28 days after receipt of Order to Commence for the Engineer's Approval. The plan shall include but not limited to the following:

- Night driving
- Safety of workers
- Diversions
- Traffic management Plan
- Towing of stalled vehicle

2. The Contractor should identify, evaluate and monitor potential traffic and road safety risks to workers and road users throughout the Contract life cycle and develop measures and plans to address them.
3. The Contractor shall install and maintain standard approved traffic warning signs, directional signs, secure the working areas and deploy flagmen at active construction sites.
4. The Contractor shall assess each phase of the works, monitor incidents and accidents indicating the mitigation measures undertaken and prepare monthly reports to be submitted to the Resident Engineer.
5. The Contractor shall factor the cost of implementation of the Road Safety Plan in the rates for the Works.

Failure by the Contractor to observe the above safety features shall be deemed to be a violation of the Contractor's Obligations and shall be grounds for Suspension and/or Termination.

8 SUB-CLAUSE 4.18: PROTECTION OF THE ENVIRONMENT

Add:

Notwithstanding the Contractor's obligation under Sub-Clause-paragraph (a), (b) and (c) of Sub-Clause 1 of 4.18 of the Conditions of Contract, the Contractor shall observe the following measures with a view to reducing or elimination adverse environmental effects by the site works:

1. All quarries and borrow pits shall be filled and landscaped to their original state after extraction of construction material
2. Soil erosion due to surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures that shall include, but are not limited to grassing and planting if trees
3. Long traffic diversion roads shall be avoided so as to minimize the effect of dust on the surrounding environment. In any case all diversions shall be kept damp and dust free
4. Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed of in such a way as not to adversely affect the environment
5. Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Government so as to minimize noise pollution and community interference.

9 SUB-CLAUSE 6.1: ENGAGEMENT OF STAFF AND LABOUR

Add the following at the end of clause 6.1:

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience who are Kenya citizens.

Any additional unskilled labour which is required by the Contractor for the works, and which is not in his employment schedule at the time of the acceptance of the Tender shall be recruited by the Contractor from the Labour Exchange or Exchange or Exchanges nearest to the site or sites of the work.

10 SUB-CLAUSE 6.5: WORKING HOURS

Add at the end of Sub-Clause 6.5 the following:

If the Contractor requests permission to work by night as well as by day, then if the Engineer shall grant such permission the Contractor shall not be entitled to any additional payments for so doing. All such work at night shall be carried out without unreasonable noise or other disturbance and the Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out night work and from and against all claims, demands, proceedings, costs, charges and expenses whatsoever in regard or in relation to such liability.

In addition, the Contractor will be required to provide, for any work carried out at night or recognized days of rest, adequate lighting and other facilities so that the work is carried out safely and properly.

In the event of the Engineer granting permission to the Contractor to work double or rotary shifts or on Sundays, the Contractor shall be required to meet any additional costs to the Employer in the administration and supervision of the Contract arising from the granting of this permission."

11 SUB-CLAUSE 6.7: HEALTH AND SAFETY

Add under the first paragraph:

The Contractor shall compensate for loss of damage suffered in consequence of any accident or injury or disease resulting from his work to any workman or other person in the employment of the Contractor or any Subcontractor is in accordance with the Workmen's Compensation Act of the Laws of Kenya

The Contractor shall ensure adequate safety program with respect to all work under the contract is complied with, whether performed by the Contractor or subcontractor is formulated and enforced. additionally, all records of health, safety and welfare shall be maintained as the Engineer may from time to time prescribe. Reports of accidents shall be submitted to the Engineer.

Add after the last paragraph:

In addition, the Contractor shall notify the Engineer and any relevant Authority the occurrence of these accidents

12 SUB-CLAUSE 7.4 TESTING

Add at the end of Sub-Clause 7.4 the following:

The Contractor shall submit to the Engineer, Project Specific Quality Management Plan for approval 28 days after issuance of order to commence. The Plan shall include but not limited to:

1. Key staff that will be involved in the project and their role in quality management
2. Resources (Human and machinery) and Resource allocation in quality management
3. Processes and procedures to be followed in quality management
4. Controls to be put in place to ensure that the quality management plan is adhered to.
5. Reporting methodology on quality Management

6. Methodology on inspection, testing, monitoring and measuring to ensure conformity to quality requirement in accordance with the contract.
7. Description on correction action to be undertaken on non-conforming outputs and corrective action to avoid recurrence.

SUBCLAUSE 8.3: PROGRAMME

Replace the text of Sub-clause 8.3 with the following:

Within the date mentioned in the Appendix to the Form of Bid of the date of the Letter of Acceptance, the Contractor shall submit to the Engineer for consent a detailed Programme showing the order, procedure, and method for carrying out the Works. The Programme shall include:

The Contractor's methodology and arrangements for executing the Works, including plant, manpower, resources, and temporary works.

- A detailed Construction Schedule (Level 4 Programme) developed using Primavera Project Planner.
- A Progress Curve/Project Cash Flow.
- A Critical Resources Usage Chart.
- A Detailed Method Statement.
- A Schedule of Submittals and Shop Drawings.
- Any other details as specified by the Engineer.

The submission and consent of the Programme shall not relieve the Contractor of any duties or responsibilities under the Contract.

If the Contractor fails to submit the Programme or a revised Programme within **28 days,** the Employer may deduct **Kshs. 50,000 per day** as liquidated damages until the Programme is submitted.

The Contractor shall programme, coordinate, and phase all Works, including those of other contractors if any, to ensure compliance with the Contract completion dates.

The Engineer may instruct the Contractor to amend the Programme to reflect site conditions. The Contractor shall comply with such instructions within **14 days.**

The Programme shall be in Critical Path Method (CPM) format, identifying critical activities and showing the relationship between early and late start/finish dates. The Programme shall align with the specified Project end date.

The Contractor shall bear all expenses and responsibility for delays resulting from its failure to prepare, provide, or approve the Programme.

The Contractor shall provide monthly progress reports, including:

- An annotated copy of the current Programme, indicating progress achieved.
- A description of actions taken to address delays and maintain the construction schedule.

The Project float, defined as the time between early and late start/finish dates of any activity in the approved Programme, is jointly owned by the Employer and the Contractor.

If the actual progress of the Works does not conform to the approved Programme, the Contractor shall, within 14 days of the Engineer's request, submit a revised Programme showing modifications necessary to ensure completion within the Time for Completion.

If the Contractor falls behind schedule, it shall take steps to improve progress and submit revised Programmes demonstrating compliance with Milestone dates, without additional cost to the Employer.

Failure to comply with this Sub-clause, following written notice from the Engineer, shall entitle the Employer to enforce this requirement.

The Contractor shall submit a detailed Cash Flow Estimate together with the PoW of receiving the Letter of Acceptance. Any resubmission required shall be made within **14 days** of the Engineer's written notice.

The Cash Flow Estimate shall include:

- A Progress Curve/Projected Cash Flow developed using Primavera Project Planner.
- An S-Curve showing cumulative progress of work done (in % of work) against time (in weeks).

Failure to comply with this Sub-clause, following written notice from the Engineer, shall entitle the Employer to enforce this requirement through the "**Penalty for Delay**" provision.

The Contractor shall submit the following reports during the execution of the Works:

- The number of personnel by craft and major equipment utilized.
- Weather conditions (maximum/minimum temperatures, humidity, rainfall).
- Weekly report before the weekly site meeting, including: Project status, safety, and environmental control.
- Monthly report, including: Executive summary, detailed progress, budget, and cash flow & photographs of the Works.

For unjustifiable delay in submission, the Employer may deduct **Kshs. 50,000** per day as liquidated damages.

The Contractor shall allow in his programme all published Kenya public holidays including but not limited to the following per calendar year during which the Contractor shall not be permitted to work.

- New Year's Day (1st January)
- Good Friday
- Easter Monday
- Idd ul fitr
- Labour Day (1st May)
- Madaraka Day (1st June)
- Mazingira Day (10th October)
- Mashujaa Day (20th October)
- Jamhuri day (12th December)
- Christmas Day (25th December)
- Boxing Day (26th December)

The Contractor shall also allow per calendar year for a further 3 unspecified public holidays which may be announced by the Government of Kenya with no prior notification upon which he shall not be permitted to work.

13 SUBCLAUSE 8.7: DELAY DAMAGES

Add the following paragraphs at the end of this Sub-Clause:

"There shall be no reduction in the amount of liquidated damages in the event that a part or a section of the Works within the Contract is certified as completed before the whole of the Works comprising that Contract.

The Employer shall **NOT** pay any bonus for early completion of the Works to the Contractor.

14 SUBCLAUSE 11.1: COMPLETION OF OUTSTANDING WORK AND REMEDYING DEFECTS

Add:

At the expiry of the Defects Notification Period, no defect arising from the permanent works existing shall be acceptable for taking over. The Employer shall verify and satisfy themselves that all the outstanding works and defects arising out of the works have been attended to sufficiently. Works shall also be inspected at the End of Defects Notification Period.

15 SUBCLAUSE 13.1: RIGHT TO VARY

Add the following paragraph at the end of subclause 13.1:

No such variations in any way shall contravene the requirements of Public Procurement and Disposal Act of 2015 and the amendments thereof.

16 SUB-CLAUSE 14.8: DELAYED PAYMENT

Replace the second paragraph with:

In the event of the failure of the Employer to make payment within the times stated, the Employer shall make payment to the Contractor of simple interest at a rate equal to two percentage points above the mean Base Lending Rate obtained from the Central Bank of Kenya. The provisions of this subclause are without prejudice to the Contractor's entitlements under subclause 16.2 or otherwise.

17 SUB-CLAUSE 14.15: CURRENCIES OF PAYMENT

The paragraphs are substituted with;

The Contract Price shall be designated in the Kenyan Shillings.

All work performed by the Contractor under the Contract shall be valued in Kenya Shillings using the rates and prices entered in the Bills of Quantities together with such other increases to the Contract Price including variation of price payments in accordance with Clause 13.

18 SUB-CLAUSE 18.1 GENERAL REQUIREMENTS FOR INSURANCES

Add the following at the end of the second paragraph:

Insurances shall not contain exclusion clauses which limit cover for activities necessary for the execution of the Contract.

All insurances shall cover the entire contract period and an additional three (3) months.

Each policy of insurance effected by the Contractor for purposes of the Contract shall include a provision to the effect that the Insurer shall have a duty to give notice in writing to the Contractor and Employer of the date when a premium becomes payable not be more than thirty (30) days before that date, and the policy shall remain in force until thirty (30) days after the giving of such notice.

SECTION XI - CONTRACT FORMS

TABLE OF FORMS

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD
FORM No. 2 - NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE
FORM No. 3 - CONTRACT AGREEMENT
FORM No. 4 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]
FORM No. 5 - ADVANCE PAYMENT SECURITY
FORM No. 6 - RETENTION MONEY SECURITY

FORM NO. I - NOTIFICATION OF INTENTION TO AWARD

[*This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender.*] [*Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form*]

FORMAT

For the attention of Tenderer's Authorized Representative

Name: …….. *[insert Authorized Representative's name]* Address: *[insert Authorized Representative's Address]* Telephones: *[insert Authorized Representative's telephone/fax numbers]* Email Address: *[insert Authorized Representative's email address]*

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

Date of Transmission:

This Notification is sent by: [*email*] on [*date*] (local time)

Procuring Entity: *[insert the name of the Procuring entity]*

Contract title: *[insert the name of the contract]*

Country: Kenya, County_____(*if the Procuring Entity is from a County*)

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

a) Request a debriefing in relation the evaluation of your Tender, and/or

b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

1. **The successful Tenderer**

Name: [*insert name of successful Tenderer*] Address: [*insert address of the successful Tenderer*] Contract price: [*insert contract price of the successful Tender*]

2 **Other Tenderers**: *insert names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.]*

	Name of Tenderer	**Tender price**	**Evaluated Tender price**	**Comments (if any)**
1				
2				
3				
4				
5				
6				
7				
Etc.				

1. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (local time).

You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award. Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

Attention: [*insert full name of person, if applicable*] **Title/position**: *[insert title/position*] **Procuring Entity**: [*insert name of Procuring Entity*] **Email address**: [*insert email address*]

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end. The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

2. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement- related Complaint as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

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

Email address: [*insert email address*]

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

In summary, there are four essential requirements:

a) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.
b) The complaint can only challenge the decision to award the contract.
c) You must submit the complaint within the period stated above.
d) You must include, in your complaint, all of the information necessary to support your case.
e) The application must be accompanied by the fees set out in the Procurement Regulations, which shall not be refundable (information available from the Public Procurement Authority at www.ppoa.go.ke.

3. Standstill Period

a) **DEADLINE:** The Standstill Period is due to end at midnight on [*insert date*] (local time).
   i) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
   ii) The Standstill Period may be extended as stated in Section 4 above.

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

Name_____

Title and Position _____

Signature_____

Date_____

FORM NO. 2 - NOTIFICATION OF AWARD

Letter of Acceptance

[letter head paper of the Procuring Entity]
[date]

FORMAT

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the **SCC**]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section X, Contract Forms, of the tender document.

We attach a copy of the Contact for your

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

FORM NO. 3 – CONTRACT AGREEMENT

THIS AGREEMENT made the _____ day of _____, ____, between

_____ of _____ (hereinafter "the Procuring Entity"), of the one part, and_____

_____

_____

_____

of_____

_____

_____

(herein after "the Contractor"), of the other part:

WHEREAS the Procuring Entity desires that the 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 Particular Conditions
   e) The General Conditions;
   f) The Specification
   g) The Drawings*;* and
   h) The completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya on the day, month and year specified above.

Signed by_____

_____(for the Procuring Entity)

Signed by_____

(for the Contractor)

FORM NO. 4 - PERFORMANCE SECURITY

– (Unconditional Demand Bank Guarantee)

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_____*[Insert date of issue]*

PERFORMANCE GUARANTEE No.:_____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____(herein after called "the Applicant") has entered into Contract No._____*dated*_____with the Beneficiary, for the execution of _____ (herein after called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Applicant, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____( ),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the …..... Day of …..... 2…[2], and any demand for payment under it must be received by us at this office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

_____

[Name of Authorized Official, signature(s) and seals/stamps]

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

---

[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(cies) 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. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the pen ultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

FORM NO. 6 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee] *[Guarantor letterhead or SWIFT identifier code] [Guarantor letterhead or SWIFT identifier code]*

Beneficiary:_____*[Insert name and Address of* Procuring Entity*]* **Date:**_____*[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____(herein after called "the Applicant") has entered into Contract No._____*dated*_____with the Beneficiary, for the execution of _____ (herein after called" the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum_____ ( ) is to be made against an advance payment guarantee.
3. At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____ ( )[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
   a) Has used the advance payment for purposes other than the costs of mobilization in respect of th e Works; or
   b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number_____at_____
5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the_____day of____,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(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Procuring Entity.*

2 *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request*

an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

FORM NO. 7 - RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____*[Insert name and Address of* Procuring Entity*]*
Date: _____*[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.:_____

[Insert guarantee reference number]

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____*[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (herein after called" the Contractor") has entered into Contract No. _*[insert reference number of the contract]* dated_____with the Beneficiary, for the execution of_____
[insert name of contract and brief description of Works*]* (herein after called" the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys 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 foot notes) is for use in preparing this form and shall be deleted from the final product.

FORM NO. 8 BENEFICIAL OWNERSHIP DISCLOSURE FORM

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. 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 Tenderer by meeting one or more of the following conditions:

- *Directly or indirectly holding 25% or more of the shares.*
- *Directly or in directly holding 25% or more of the voting rights.*
- *Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

Tender Reference No.:_____[*insert identification no*] Name of the Assignment:_____*[insert name of the assignment]* to:_____*[insert complete name of Procuring Entity]*

In response to 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

Identity of Beneficial Owner	**Directly or indirectly holding 25% or more of the shares** **(Yes / No)**	**Directly or indirectly holding 25 % or more of the Voting Rights** **(Yes / No)**	**Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer** **(Yes / No)**
[include full name (last, middle, first),			

nationality, country of residence]			

OR

ii) We declare that there is no Beneficial Owner meeting one or more of the following conditions: directly or indirectly holding 25% or more of the shares. Directly or indirectly holding 25% or more of the voting rights. Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.

OR

We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Tenderer shall provide explanation on why it is unable to identify any Beneficial Owner]

Directly or indirectly holding 25% or more of the shares. Directly or indirectly holding25% or more of the voting rights.

Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer]"

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]*

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]