REPUBLIC OF KENYA

KENYA URBAN ROADS AUTHORITY
Transforming Urban Mobility

TENDER DOCUMENT

FOR

TENDER NAME:

IMPROVEMENT OF RAILWAY CITY ACCESS ROAD

TENDER NO: KURA/DEV/HQ/524/2025-2026

(WOMEN)

JUNE 2026

DIRECTOR - (RP&D)
KENYA URBAN ROADS AUTHORITY
P.O.BOX 41727-00100
NAIROBI
Email: Info.kura.go.ke

DIRECTOR GENERAL
KENYA URBAN ROADS AUTHORITY
P.O.BOX 41727-00100
NAIROBI
Email: dg@kura.go.ke

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TENDER DOCUMENTS FOR PROCUREMENT OF CIVIL WORKS

1) ADDRESSES OF PROCURING ENTITY
Name Procuring Entity: Kenya Urban Roads Authority

Postal Address: P.O. Box 41727 – 00100, NAIROBI.

Physical Address: Deputy Director, Supply Chain Management

Tel: +254717105233

Email address: supplychain@kura.go.ke

2) Invitation to Tender (ITT) NO. KURA/DEV/HQ/524/2025-2026
Tender Name: **IMPROVEMENT OF RAILWAY CITY ACCESS ROAD**

INVITATION TO TENDER

KENYA URBAN ROADS AUTHORITY P.O. BOX 41727 - 00100 NAIROBI
TENDER NAME AND DESCRIPTION: IMPROVEMENT OF RAILWAY CITY ACCESS ROAD

KENYA URBAN ROADS AUTHORITY invites sealed tenders for **IMPROVEMENT OF RAILWAY CITY ACCESS ROAD**located in **STAREHE CONSTITUENCY** in **NAIROBI COUNTY**. The contract period for the proposed works will be **15 months** with the **12 months** defects liability period.

1. Tendering will be conducted under National open competitive method using a standardized tender document. Tendering is open to all qualified and interested Tenderers in the category specified in the tender Notice.

2. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours [i.e. 0800 to 1700 hours] at the address given below.

3. A complete set of tender documents may be purchased or obtained by interested tenderers upon payment of a non- refundable fees of Kshs. 1,000 (Kenya Shillings One Thousand Only) in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the website(s) www.kura.go.ke or www.tenders.go.ke. Tender documents obtained electronically will be free of charge. Tenderers downloading documents from a designated Website shall advise the Procurement Entity that they have downloaded the tender documents, giving full contact addresses of the tenderer (*email, telephone number and postal address*).

4. Tender documents may be viewed and downloaded for free from the website www.kura.go.ke or www.tenders.go.ke. Tenderers who download the tender document **MUST** forward their particulars immediately to supplychain@kura.go.ke, +254717105233 AND/OR P.O. BOX 41727-00100, NAIROBI to facilitate any further clarification or addendum.

5. Tenders shall be quoted in Kenya Shillings and shall include all taxes. Tenders shall remain valid for **210 days** from the date of opening of tenders.

6. All Tenders must be accompanied by a Tender Securing Declaration form dully filled.

7. The Tenderer **SHALL** chronologically and sequentially serialize all pages of the tender documents submitted in the numerical format i.e. 1,2,3,4….. including the cover page and all other pages and attachments.

8. Completed tenders must be delivered on or before **as indicated in the Tender Notice**

9. Tenders will be closed **on as indicated in the Tender Notice.** Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.

10. Late tenders will be rejected.

11. The addresses referred to above are:

DIRECTOR GENERAL,
KENYA URBAN ROADS AUTHORITY,
P.O. BOX 41727-00100, NAIROBI, BARABARA PLAZA OFF MAZAO ROAD, 4TH FLOOR., BLOCK D
info@kura.go.ke

A. Address for obtaining further information

KENYA URBAN ROADS AUTHORITY
SUPPLY CHAIN MANAGEMENT OFFICE
BARABARA PLAZA OFF AIRPORT SOUTH ROAD MAZAO ROAD, GROUND FLOOR; BLOCK D
P.O. BOX 41727-00100, NAIROBI

DEPUTY DIRECTOR (SUPPLY CHAIN MANAGEMENT),
+254717105233, supplychain@kura.go.ke

B. Address for Submission of Tenders.

1) Name of Procuring Entity: **KENYA URBAN ROADS AUTHORITY**

2) Postal Address: **Deputy Director -Supply Chain Management**
P.O. BOX 41727 – 00100,
Nairobi.

Physical address **Barabara Plaza Off Airport South Road Mazao Road, Ground Floor; Block D**

3)

C. Address for Opening of Tenders.

1) Name of Procuring Entity: **KENYA URBAN ROADS AUTHORITY**
Physical address: **Barabara Plaza Off Airport South Road Mazao Road, Ground Floor; Block D**

Name: ENG. SILAS M. KINOTI

Designation: DIRECTOR GENERAL

DIRECTOR GENERAL
KENYA URBAN ROADS AUTHORITY (KURA)
P. O. Box 41727 - 00100
NAIROBI

Signature _____

Date: 30th JUNE 2026

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. Scope of Tender

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

2. Fraud and Corruption

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

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

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

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

3. Eligible Tenderers

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

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

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

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

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

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

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

4. Eligible Goods, Equipment, and Services

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

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

5. Tenderer's Responsibilities

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

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

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

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

B. Contents of Tender Documents

6. Sections of Tender Document

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

PART 1 Tendering Procedures

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

PART 2 Works Requirements

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

PART 3 Conditions of Contract and Contract Forms

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

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

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

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

7. Site Visit

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

8. Pre-Tender Meeting

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

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

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

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

9. Clarification and amendments of Tender Documents

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

10. Amendment of Tendering Document

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

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

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

C. Preparation of Tenders

11. Cost of Tendering

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

12. Language of Tender

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

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

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

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

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

14. Form of Tender and Schedules

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

15. Alternative Tenders

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

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

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical

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

16. Tender Prices and Discounts

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

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

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

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

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

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

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

17. Currencies of Tender and Payment

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

18. Documents Comprising the Technical Proposal

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

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

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

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

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

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

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

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

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

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

19.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (whether through its own enquiries, through notification by the

public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:

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

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

20. Period of Validity of Tenders

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

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

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

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

21. Tender Security

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

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

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

21.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable.

The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 20.2.

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

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

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

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

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

f) if the successful Tenderer fails to:

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

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

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

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

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

22. Format and Signing of Tender

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

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

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

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

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

D. Submission and Opening of Tenders

23. Sealing and Marking of Tenders

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

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

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

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

24. Deadline for Submission of Tenders

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

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

25. Late Tenders

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

26. Withdrawal, Substitution, and Modification of Tenders

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

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

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

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

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

27. Tender Opening

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

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

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

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

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

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

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

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

minimum:

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

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

E. Evaluation and Comparison of Tenders

28. Confidentiality

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

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

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

29. Clarification of Tenders

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

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

30. Deviations, Reservations, and Omissions

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

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

31. Determination of Responsiveness

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

31.2 A substantially responsive Tender is one that meets the requirements of the Tender

document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:

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

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

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

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

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

32. Non-material non-conformities

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

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

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

33. Arithmetical Errors

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

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

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

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

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

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

34. Currency provisions

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

35. Margin of Preference and Reservations

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

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

36. Nominated Subcontractors

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

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

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

37. Evaluation of Tenders

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

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

a) price adjustment due to discounts offered in accordance with ITT 16;
b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with IIT39;
c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
d) any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.

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

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

38. Comparison of Tenders

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

39. Abnormally Low Tenders

39.1 An Abnormally Low Tender is one where the Tender price, in combination with other

elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

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

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

40. Abnormally High Tenders

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

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

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

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

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

41. Unbalanced and/or Front-Loaded Tenders

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

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

a) accept the Tender; or

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

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

d) reject the Tender,

42. Qualifications of the Tenderer

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

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

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

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

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

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

43. Best Evaluated Tender

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

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

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

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

F. Award of Contract

45. Award Criteria

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

46. Notice of Intention to enter into a Contract

46.1 Upon award of the contract and prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract /

Notification of award to all tenderers which shall contain, at a minimum, the following information:

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

47. Standstill Period

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

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

48. Debriefing by the Procuring Entity

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

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

49. Letter of Award

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

50. Signing of Contract

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

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

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

51. Appointment of Adjudicator

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

General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Performance Security

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

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

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

53. Publication of Procurement Contract

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

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

54. Procurement Related Complaints and Administrative Review

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

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

Section II - Tender Data Sheet (TDS)

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

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	A. General
ITT 1.1	The name of the contract **IMPROVEMENT OF RAILWAY CITY ACCESS ROADIN NAIROBI COUNTY** The reference number of the Contract is **KURA/DEV/HQ/524/2025-2026** The number and identification of lots (contracts) comprising this tender are **NOT APPLICABLE**
ITT 2.3	The Information made available on competing firms is as follows: **NOT APPLICABLE**
ITT 2.4	The firms that provided consulting services for the contract being tendered for are: **NOT APPLICABLE**
ITT 3.1	Maximum number of members in the Joint Venture **NOT APPLICABLE**
ITT 3.10	Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts and labor) from national suppliers and contractors. **NOT APPLICABLE**
B. Contents of Tender Document	
ITT 7.1	The pretender site visit **SHALL NOT TAKE PLACE AS INDICATED IN THE TENDER NOTICE**
ITT 8.1	(A) Pre-Tender conference ***SHALL NOT*** take place (B) A pre-arranged pretender visit of the site of the works ***SHALL not*** take place **as INDICATED IN THE TENDER NOTICE**
ITT 8.2	i. The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than **7 days before closure/opening date.** ii. The Procuring Entity will publish the response at the Website **www.kura.go.ke**
ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published **NOT APPLICABLE**
ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: **KENYA URBAN ROADS AUTHORITY** **SUPPLY CHAIN MANAGEMENT OFFICE** **BARABARA PLAZA OFF AIRPORT SOUTH ROAD MAZAO ROAD, GROUND FLOOR;** **BLOCK D** **P.O. BOX 41727-00100, NAIROBI** **DEPUTY DIRECTOR (SUPPLY CHAIN MANAGEMENT),** **+254717105233, supplychain@kura.go.ke**
C. Preparation of Tenders	
ITT 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: ***As indicated in the qualification criteria and Tender Notice***
ITT 13.2	The Tenderer shall chronologically and sequentially serialize all pages of the tender documents submitted in the format of 1,2,3,4,5……. Including the cover page and all other pages.
ITT 11.1 (h)	The Tenderer shall submit the following additional documents in its Tender: 1. Written Form of Power Attorney, signed by Commissioner for Oaths

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	2. Duly filled Schedule of Adjustment Data 3. Appendix to form of tender fully filled, stamped and signed 4. A schedule of basic rates for construction materials fully filled, stamped and signed 5. Schedule of completed and ongoing works 6. Certified certificate of incorporation 7. certified copy of recent CR12 form generated through the system-(12months before opening date) from Registrar of companies 8. Copy of registration certificate with National Construction Authority in the stated category. 9. Copies of audited accounts and bank statements for the last five years ALL CERITIFICATION MUST BE BY COMMISSIONER FOR OATHS.
ITT 15.1	Alternative Tenders ***SHALL NOT*** be permitted
ITT 15.2	Alternative times for completion ***SHALL NOT*** permitted.
ITT 15.4	Alternative technical solutions ***SHALL NOT*** be permitted.
ITT 16.5	The prices quoted by the Tenderer shall be: ***FIXED***
ITT 17.1	The currency(ies) of the Tender and the payment currency(ies) shall be as described below: (a) The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely **in Kenya Shillings.**
ITT 20.1	The Tender validity period shall be **210 days.**
ITT 21.1	A Tender-Securing Declaration ***SHALL BE*** required.
ITT 21.2 (d)	The other Tender Security shall **NOT APPLICABLE**
ITT 21.5	On Performance Security, other documents required shall be: **as per the contract**
ITT 22.1	The tenderer shall prepare and submit **ONE** original Tender document and **ONE** Copy Tender Document.
ITT 22.2 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of ***Certificate of Independent Tender Determination with sworn affidavit.***
D. Submission and Opening of Tenders	
ITT 24.1	(A) For Tender submission purposes only, the Procuring Entity's address is: (1) Name of Procuring Entity: **KENYA URBAN ROADS AUTHORITY** (2) Postal Address: **DEPUTY DIRECTOR (SCM),** **OFFICE, BARABARA PLAZA OFF AIRPORT SOUTH ROAD MAZAO ROAD,** **GROUND FLOOR;** **BLOCK D** **P.O. BOX 41727– 00100, NAIROBI** **TEL: +254717105233,** **EMAIL: supplychain@kura.go.ke** (3) Physical address **BARABARA PLAZA OFF AIRPORT SOUTH ROAD** **MAZAO ROAD, GROUND FLOOR;** **BLOCK D** (4) Date and time for submission of Tenders: **AS PER TENDER NOTICE** (5) **Tenders shall NOT be submitted through electronic transmission**
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	Tenders provided below: (1) Name of Procuring Entity: **KENYA URBAN ROADS AUTHORITY** (2) Physical address **BARABARA PLAZA OFF AIRPORT SOUTH ROAD MAZAO ROAD, GROUND FLOOR; BLOCK D** (3) State date and time of tender opening. **AS PER TENDER NOTICE**
ITT 27.1	**ELECTRONIC SUBMISSION OF TENDERS SHALL NOT BE ALLOWED.**
ITT 27.6	The tenders ***shall*** be initialed by representatives of the Procuring Entity attending Tender opening. Initialization shall be conducted as follows: - ALL MEMBERS OF TENDER OPENING COMMITTEE SHALL • Initialize summary page of BOQ, • Form of Tender • Bid Bonds/Tender Securing Declaration Form • Cover page of the Bid Document • Last page of the Bid Document
E. Evaluation, and Comparison of Tenders	
ITT 32.3	The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate. **NOT APPLICABLE**
ITT 35.2	The invitation to tender is extended to bidders **as indicated in the Tender Notice.**
ITT 36.1	At this time, the Procuring Entity *DOES NOT INTEND to* execute certain specific parts of the Works by subcontractors selected in advance.
ITT 36.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: **NOT APPLICABLE**
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 51.1	The Adjudicator SHALL APPLY.
ITT 54.1	The procedures for making a Procurement-related Complaints are detailed in the "Regulations" available from the PPRA Website info@ppra.go.ke or email complaints@ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to: For the attention: ***ENG. SILAS M. KINOTI MBS*** Title/position: ***DIRECTOR GENERAL*** Procuring Entity: ***KENYA URBAN ROADS AUTHORITY*** Email address***: dg@kura.go.ke*** In summary, a Procurement-related Complaint may challenge any of the following: (i) the terms of the Tender Documents; and (ii) the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provisions

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.

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 should use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.

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 Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

Preliminary Evaluation Criteria

S/No.	Qualification Subject	References	Qualification Requirement	Qualification (MET/NOT MET)
1.	Form of Equipment	Section IV; Form EQU	• Properly fill, sign and Stamp • Provide all required information	
2	Key personnel and Declaration	Section IV; Form PER 1 & 2	• Provide all required information • Properly fill, sign and stamp	
3	Tender Qualification	Section IV; Form 4, ELI-1.1, ELI-1.2	• Provide all required information • Properly fill, sign and stamp	
4	Non-Performance	Section IV; Form 4, Form CON-2	• Provide all required information • Properly fill, sign and stamp	
5	Pending Litigation	Section IV; Form 4, Form CON-2	• Provide all required information • Properly fill, sign and stamp	
6	Litigation History	Section IV; Form 4, Form CON-2	• Provide all required information • Properly fill, sign and stamp	
7	Financial Situation & Performance	Section IV; Form 4, Form, FIN-3.1	• Provide all required information • Properly fill, sign and stamp	
8	Average Annual Construction Turnover	Section IV; Form 4, Form FIN-3.2	• Provide all required information • Properly fill, sign and stamp	
9	Financial Resources	Section IV; Form 4, Form FIN-3.3	• Provide all required information • Properly fill, sign and stamp	
10	Current Contract Commitments/Works in Progress	Section IV; Form 4, Form FIN-3.4	• Provide all required information • Properly fill, sign and stamp	
11	General Construction Experience	Section IV; Form 4, Form EXP-4.1	• Provide all required information • Properly fill, sign and stamp	
12	Specific Construction and Contract Management Experience	Section IV; Form 4, Form EXP-4.2(a)	• Provide all required information • Properly fill, sign and stamp	
13	Construction Experience in Key activities	Section IV; Form 4, Form EXP-4.2(b)	• Provide all required information • Properly fill, sign and stamp	
14	Form of Tender	Section IV; Format	• Provide all required information • Properly fill, sign and stamp • Tenderer to use stationery bearing its letterhead • Erasers/Alterations must be countersigned	
15	Tenderer's Eligibility	Section IV; Form 5 A(a-f)	• Provide all required information • Properly fill, sign and stamp	
16	Certificate of Independent Tender Determination	Section IV; Form 5 B	• Provide all required information • Properly fill, sign and stamp	
17	Self-declaration Forms	Section iv; Form 5 C -FORM SD1 & 2	• Provide all required information • Properly fill, sign and stamp	
18	Form of Tender Security /Tender declaration Form	• Section IV; 7	• Form of Tender Security **(Tender Bond)** - In the format provided with all conditions. Must be valid for 30 days after bid validity	

			• Tender Securing Declaration Form to be fully filled, signed and stamped.	
19	Priced Bill of Quantities	• Section VII (Bill of Quantities)	• Fill all the bill of Quantities, sign stamp and counter sign any alteration(s)	
20	Serializing of document	TDS CLAUSE 13.2	• Chronologically and sequentially serialize all pages of the tender documents submitted in the numerical format i.e. 1,2,3,4….. Including the cover page and all other pages and attachments.	
21	Certificate of Incorporation certificate	ITT 13.1 (h)	• Copy certified by commissioner of oaths	
22	Tax Compliance Certificate	ITT 13.1 (h)	• Must be valid	
23	National Construction Authority Certificate	ITT 13.1 (h)	• Category stated in the Tender Notice	
24	Recent CR12 Certificate	ITT 13.1 (h)	• Copy certified and current (As Indicated in the Tender Notice) • Copy certified by commissioner of oaths	
25	Special conditions of contract	Section IX	• Must fill, stamp and sign	
26	Commitment to provide beneficial ownership INFORMATION	Section IV: 8	• Must fill, stamp and sign	
27	Copies of Tender Document	ITT 22.1	• ONE original and ONE exact replica of original tender document.	
28	Pre Tender Site Visit	ITT 8.1	• A mandatory Pre-Tender meeting shall take place as specified in the tender notice.	
29.	Completeness of tender document	• ITT 22.3 • ITT 22.5	• 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 document must be countersigned. • Fully filled certificate of independent tender determination.	
30	Addendum	• ITT 6.3 • ITT 8.4 • ITT 10.2	• To be attached (if any).	

3. **Assessment of adequacy of Technical Proposal with Requirements (if Applicable)**

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

ITEM		DESCRIPTION	ASSESSMENT
1		**FINANCIAL CAPABILITY**	Met/Not Met
	a	Working capital of **Kshs. 104,000,000.00 (20% of contract price)**	
	b	Cash flow statement (forecasts)	
	c	Audited Statements of account for the last 2 years presented in the Internationally Financial Reporting Standard	
	d	Turnover of **Kshs. 520,000,000.00(Equivalent to the EE/Budget)**	
2		**EXPERIENCE**	
	a	General Experience as Contractor in the last five years.	
	b	Experience in road construction in the last five years	
	c	Experience as a prime contractor, joint venture member, management contractor or sub-contractor in at least three (3) road projects with value of **Kshs. 260,000,000.00 (50% of the Budget).**	
	d	Ongoing Works (Value of outstanding works shall not be more than the Engineer`s Estimate/Budget)	
3		**KEY PERSONNEL**	
	a	HQ Staff meets criteria	
	b	Site Agent meets criteria	
	c	Foreman meets criteria	
	d	Surveyor meets criteria	
4		**PLANT AND EQUIPMENT**	
	a	Details of all listed equipment in table 9 provided	
5		**WORK METHODOLOGY**	
	a	Submission of a work methodology and a proposed resource work programme with superimposed cash projection. Work programme to be done in A3 paper.	
6		**CURRENT COMMITMENTS**	
	a	The total value of outstanding works on the on-going contracts must not exceed the average annual turnover for the last two years.	
		REMARKS	Met/Not Met

Tenderers who do not score **MET** will automatically be disqualified. Tenderers who pass the technical evaluation will be evaluated further.

4. **Tender Evaluation (ITT 37) Price evaluation**: in addition to the criteria listed in ITT 37.2 (a)

– (c) the following criteria shall apply:

i) **Alternative Completion Times, i**f permitted under ITT 13.2, will be evaluated as follows:
NOT APPLICABLE

ii) **Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: NOT APPLICABLE

iii) **Other Criteria; i**f permitted under ITT 37.2(d): AS DETAILED IN EVALUATION CRITERIA IN SECTION111; EVALUATION AND QUALIFICATION CRITERIA

5. **Multiple Contracts**

Multiple contracts will be permitted in accordance with ITT 37.4. Tenderers are evaluated on basis of Lots and the lowest evaluated tenderer identified for each Lot. The Procuring Entity will select one Option of the two Options listed below for award of Contracts.

OPTION 1

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

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

OPTION 2

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

6. **Alternative Tenders (ITT 13.1)**

An alternative if permitted under ITT 15.1, 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 Entity.

7. **Margin of Preference** is: NOT APPLICABLE

8. **Post qualification and Contract ward (ITT 37), 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 **Kshs. 104,000,000.00 (20% of EE/Budget)**

ii) Minimum average annual construction turnover of Kenya Shillings **Kshs. 520,000,000.00(Equivalent to the EE/Budget),** equivalent calculated as total certified payments received for contracts in progress and/or completed within the last (two) 2 years.

iii) At least three (3) 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 260,000,000.00 (50% of Budget/EE)**

iv) Contractor's Representative and Key Personnel, which are specified as detailed in the Qualification Form Summary below; -

v) Contractors key equipment listed on the table "Contractor's Equipment" below; -

vi) Other conditions depending on their seriousness.

a) **History of non-performing contracts**:
Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last 3 years. The required information shall be furnished in the appropriate form.

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

c) **Litigation History**
There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last **Three (3) 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 year's specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

9. QUALIFICATION FORM CRITERIA

1	2	3	*4*	*5*
Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed by Tenderer*	*For Procuring Entity's Use (Qualification MET or NOT MET)*
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.14.	TDS; ITT 13.1 (h)	
3	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender Confidential Business Questionnaire	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.8	Form of Tender ITT 11.1	
5	State- owned Enterprise	Meets conditions of ITT 3.7	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
6	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
7	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default for the last 5 years Non-performance shall be deemed to have occurred by evidence of: • Termination Letter • Liquidated Damages	Form CON-2 If a bidder fails to disclose, shall be disqualified Reference to be made to procuring Authority's records	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender part xiii	
9	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in section III of evaluation criteria 7 b(vi) b and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer for the last (3) Three years.	Form CON – 2	
11	Financial Capabilities	(i) The Tenderer shall demonstrate that they have 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	Form FIN – 3.1, with attachments *The Financial ratio Form to be signed by the Auditor registered with ICPAK and one of the Directors*	

1	2	3	*4*	*5*
Item No.	Qualification Subject	Qualification Requirement	*Document To be Completed by Tenderer*	*For Procuring Entity's Use (Qualification MET or NOT MET)*
		cash flow requirements estimated as **Kenya Shillings 104,000,000.00(20% of EE/Budget)** equivalent for the subject contract(s) net of the Tenderer's other commitments. (ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) 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 Two (2) 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).	• ***Financial Ratios*** *Computation shall be made for the following Ratios* *-Working Capital* *- Debt to Equity Ratio* *- Current ratio* *- Operating Cash Flow ratio* • *Line of Credit* • *Bank statements (Last 6 Months)* • *Etc.* *Attachments include:* • ***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. *The financial statements shall conform to the International Financial Reporting Standards (IRFS)*	
12	Average Annual Construction Turnover	Minimum average annual construction turnover of Kenya Shillings **520,000,000.00– *[Amount in Figures Equivalent to Budget/EE),*** equivalent calculated as total certified payments received for contracts in progress and/or completed within the last Three (3) years, divided by 3 years.	Form FIN – 3.2 *Attachments include Financial Statements, Payment certificates*	
13	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last three (3) years.	Form EXP – 4.1 *Attach Letters of Award and Completion Certificates*	

1	2	3	*4*	*5*
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***	***For Procuring Entity's Use (Qualification MET or NOT MET)***
14	Specific Construction & Contract Management Experience	A minimum number of three (*3)* similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor prior to the applications submission deadline. I.e. three (3) contracts, each of minimum value Kenya shillings of **260,000,000.00(50% of EE/ budget)** equivalent. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics	Form EXP 4.2(a) • *Provide Letters of Award and Completion Certificates* • *For subcontracts and **entry level bidders** provide the following;* *a) Award letter of the main contractor* *b) Award letter of the subcontract.* *c) Completion letter of the subcontract.* *d) Witnessed Subcontract agreement.*	
15	Contractor's Equipment	-Bidder shall provide evidence of ownership whether owned or leased (except those from Mechanical & Transport Department (MOTIHUD) - Those hiring shall provide certified copies of Lease Agreement Valid for the current **FY 2025-2026**	Form EQU and Equipment Table (9) below	
16	Contractor's Representative and Key Personnel	The site staff shall possess minimum levels of qualifications set below; HQ Staff: Qualification: Diploma/Degree in Finance or Human Resource Management. General Experience: 3 years Specific Experience in similar works: 2 years Site Agent: Qualification = BSc. in Civil Engineering General Experience – 5 years Specific Experience - 3 years Professional Engineer	Form PER -1 and Form PER-2	

1	2	3	*4*	*5*
Item No.	**Qualification Subject**	**Qualification Requirement**	*Document To be Completed by Tenderer*	*For Procuring Entity's Use (Qualification MET or NOT MET)*
		Materials Technologist: Qualification = Dip. Civil Engineering General Experience = 5 years Specific Experience = 3 Years Foreman: Qualification = Dip. Civil Engineering General Experience = 5 years Specific Experience = 3 Years Surveyor: Qualification = Diploma in Survey General Experience = 5 years Specific Experience = 3 Years		
Work Methodology				
17	Work Methodolgy	Submission of a brief work methodology giving a brief description of how you intend to carry out the work including; Signed resourced work **programme chart on A3 SHEET with** SUPERIMPOSED cash flow projection, traffic management, quality assurance of works and general Site organization in not less than three (3) pages and not more than five (5) pages (typed, font 12 and single spaced). Further, the methodology should include the following: **a) Procedure on execution of activities as outlined in the BoQs** b) Allocation of machinery/labor in execution the activities c) Procedures in quality control of the activities described in BoQs d) Provide a methodology on health and safety during the construction period. e) Personal protective equipment f) Signage g) Delineation of construction and passage of traffic Passage of traffic at night h) Site Organization.	Section IV; Schedule B & Schedule E	

1	2	3	*4*	*5*
Item No.	**Qualification Subject**	**Qualification Requirement**	*Document To be Completed by Tenderer*	*For Procuring Entity's Use (Qualification MET or NOT MET)*
		i) Risk Management Environment al Management		
26.Current Commitments				
26	On-going contracts	The total value of outstanding works on the on-going contracts must not exceed the average annual turnover for the last two years.	Form FIN - 3.4	
POST QUALIFICATION:				
The procuring entity may verify the documents provided by the bidder with the issuing authority.				

10. CONTRACTOR'S EQUIPMENT.

The Bidder shall indicate the core plant and equipment considered by the company to be necessary for undertaking the project together with proof of ownership or lease of the same. The lease must be current i.e. should for FY 2024-2025. Leases which are out dated will not be accepted. (* Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder shall make available for the Contract).

Item No.	Equipment Details	Ideal Number Required for the Contract Execution	No. of Equipment Owned by the Bidder	No. of equipment to be hired/purchased by the Bidder	No. of equipment to be made available for the Contract by the Bidder	Date of Arrival on Project (Days after commence)
	A) Concrete Equipment					
	(i) Mobile concrete mixers	1				
	(ii) Concrete vibrators	1				
	B) Transport (Tippers, dumpers, water tankers)					
	(i) 6 X 4 tippers payload 16 – 20 tones	4				
	(ii) Water tankers (18,000 – 20,000 lts. capacity)	1				
	C) Earth – Moving Equipment					
	(i) Wheeled loaders	1				
	(ii) Motor graders (93 - 205kW)	1				
	D) Excavators					
	1. Hydraulic crawler mounted (7 – 10 tonnes) – 0.25 – 0.4 m3 SAE bucket.	1				
	E) Rollers					
	(i) Self-propelled single drum vibrating (various types) (ii) Pneumatic Roller	1 1				
	F) F) Others					

Item No.	Equipment Details	Ideal Number Required for the Contract Execution	No. of Equipment Owned by the Bidder	No. of equipment to be hired/purchased by the Bidder	No. of equipment to be made available for the Contract by the Bidder	Date of Arrival on Project (Days after commence)
	(i) Paver (ii) Hand sprayer (iii) Pedestrian Roller	1 1 1				

I certify that the above information is correct.

Signature of Tenderer: …… Date: ……

11. Financial

The tenders that pass the technical assessment shall be subjected to costs comparison. The Best Evaluated Tender shall be determined as the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

a) Most responsive to the tendering document; and

b) The lowest evaluated cost.

QUALIFICATION FORMS

1. FORM: EQUIPMENT

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

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment ☐ 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	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

2. FORM PER -1

Contractor's Representative and Key Personnel Schedule

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

Contractor' Representative and Key Personnel

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

4.	Title of position: Surveyor

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

3. FORM PER-2:

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

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

Name of Tenderer ……

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

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

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

Declaration

I, the undersigned 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:	*Start Date……..End Date……* *[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*
Time commitment:	*Start Date……..End Date……* *[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*

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

a) be taken into consideration during Tender evaluation;

b) 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): _____

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

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

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

Declaration

I, the undersigned 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:	*Start Date……..End Date……* *[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*
Time commitment:	*Start Date……..End Date……* *[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*

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

d) be taken into consideration during Tender evaluation;

e) my disqualification from participating in the Tender;

f) 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): _____

FORM CON – 3(A): DECLARATION OF KNOWLEDGE OF SITE

This is to certify that

[Name/s]……

……

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

……

……

Has familiarized himself/herself with the Site conditions in accordance with the Instructions to bidders and the Tender Notice for purposes of bidding for this road project

Having studied the tender Documents, and gained knowledge of local conditions on site likely to influence the works and cost thereof, I certify that I am satisfied with the description of the works and understand the scope of works as specified and as implied in this tender.

…… ……..

(Signed and Stamped by Authorized Bidder's Agent/ Representative) **(Designation)**

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

This is to certify that

[*Name/s*]……

…….

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

……

……

Appraise themselves with the site conditions before bidding of the works for the

TRAFFIC CIRCULATION IMPROVEMENT WITHIN NAIROBI RAILWAY CITY IN NAIROBI COUNTY
KURA/DEV/HQ/527/2025-2026

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.

4. TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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

4.1 FORM ELI -1.1

Tenderer Information Form

Date: _____

ITT No. 13.1 and title: DOCUMENTS COMPRISING THE TENDER

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

4.2 FORM ELI -1.2

Tenderer's JV Information Form
(to be completed for each member of Tenderer's JV)
Date: *NOT APPLICABLE*

ITT No. and title: *NOT APPLICABLE*

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

4.3 FORM CON – 2

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No. 37 (7) vi, (a) and title: NON-PERFORMANCE

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

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
……..	……..	Contract Identification: …… ……. Name of Procuring Entity: ……. …… Address of Procuring Entity: ……. …… Matter in dispute: …… Party who initiated the dispute: ……. Status of dispute: ……	…….
……..	……	Contract Identification: ……. …….. Name of Procuring Entity: ……. …….. Address of Procuring Entity: ……. …… Matter in dispute: …… Party who initiated the dispute: ……. ……. Status of dispute: ……..	

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

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

☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.

Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), Kenya Shilling

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

4.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: ……..

Date: …….

JV Member's Name: NOT APPLICABLE

ITT No. 37 (7) b i, ii & iii and title: FINANCIAL PERFORMANCE

4.4.1. Financial Data

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

*Refer to ITT 15 for the exchange rate

4.4.2 Sources of Finance

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

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

4.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for *2*years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

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

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

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

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

☐ Attached are copies of financial statements[1] for the *2*years required above; and complying with the requirements

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

4.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No.37 (7) b, iii and title:

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

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

4.6 FORM FIN – 3.3:

Financial Resources

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

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

4.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

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

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

Signature of Tenderer……..……. *Date ……*

4.8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name: _____

ITT No. and title: _____

Page _____of _____pages

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

		Address: ……. ……..	
		Contract name: ……... …… Brief Description of the Works performed by the Tenderer: ……. …… Amount of contract: …… Name of Procuring Entity: …….. ……. Address: ……. ……	

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No. and title: _____

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

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

Specific Construction and Contract Management Experience (cont.)

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

4.11 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: *NOT APPLICABLE*

Sub-contractor's Name[2] (as per ITT 34): _____

ITT No. and title: _____

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

1. Key Activity No One: _ _____

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

[2] If applicable

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

2. Activity No. Two

OTHER FORMS

5. FORM OF TENDER

INSTRUCTIONS TO TENDERERS

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

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

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

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

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

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

Request for Tender No.: …… *[insert identification*]

Name and description of Tender …… *[Insert as per ITT)*

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

To: KENYA URBAN ROADS AUTHORITY [*insert complete name of Procuring Entity*]

Dear Sirs,

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

   The above amount includes foreign currency amount (s) of [*state figure or a percentage and currency*] [figures] NOT APPLICABLE [words] NOT APPLICABLE.

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

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

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

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

5. We, the undersigned, further declare that:
   i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
   ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
   iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;

iv) *Conformity:* We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works];*

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

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

Option 2, in case of multiple lots:

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

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

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

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

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

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

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

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

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

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

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

Name of Recipient	Address	Reason	Amount

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

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

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

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

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

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

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

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

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

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

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

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

Date signed_____day of_____, _____

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

A. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

Instruction to Tenderer

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

(a) **Tenderer's details**

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

General and Specific Details

b) Sole Proprietor, provide the following details.

Name in full NOT APPLICABLE Age Nationality
Country of Origin Citizenship

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) Registered Company, provide the following details.

i) Private or public Company_____

ii) State the nominal and issued capital of the Company_____

Nominal Kenya Shillings (Equivalent).....

iii) Issued Kenya Shillings (Equivalent).....

iv) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

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

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

If yes, provide details as follows.

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

ii) Conflict of interest disclosure

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process.		
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		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	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 DETERMINATION

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

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

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

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

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

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

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

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

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

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

Name: ……..

Title: …….

Signature:…….

Date _____

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

C. SELF - DECLARATION FORMS

FORM SD1

SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENTAND ASSET DISPOSALACT 2015.

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

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

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of ……...…….. *(Insert name of the Company)* who is a Bidder in respect of Tender

   No. ……..

   …….. For ……. *(Insert tender title/description)* for

   ……..……. *(insert name of the Procuring entity)* and duly authorized and competent to make this statement.

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

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

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

   Bidder Official Stamp

FORM SD2

SELF DECLARATION THAT THE PERSON/TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

I, ……. of P. O. Box .....……. being a resident of

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

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of …….....
2. *(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.

3. 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.

4. 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)

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

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

…… ……..…… .....……

(Title) (Signature) (Date)

Bidder's Official Stamp

DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

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

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

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

Position…….

Office address… P. O. Box …….. Telephone……

E-mail……

Name of the Firm/Company…….

Date…….

(Company Seal/ Rubber Stamp where applicable)

Witness

Name ……..

Sign..... Date……

D. APPENDIX 1 - FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

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

3. Requirements

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

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

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
   a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
   b) if a contract has already been entered into with the person, the contract shall be voidable;
4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
   a) shall not take part in the procurement proceedings;
   b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

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

a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:

i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii) "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

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

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

v) "obstructive practice" is:

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

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

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

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

d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;

e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect[2] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

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

Name of Authorized Signatory……..

Designation ……...

Signature, Date and Stamp……..

---

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

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

FORM OF TENDER SECURITY (TENDER BOND)

[The Surety shall fill in this Tender Bond Form in accordance with the instructions indicated.]

BOND NO. _____

1. BY THIS BOND _____ *[name of tenderer]* as Principal (hereinafter called "the Principal"), and _____, **authorized to transact business in KENYA**, as Surety (hereinafter called "the Surety"), are held and firmly bound unto _____ as Obligee (hereinafter called "the Procuring Entity") in the sum of *[amount of Bond]*_____/, for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Principal has submitted or will submit a written Tender to the Procuring Entity dated the_____day of_____ , for the supply of _____ *[name of Contract]* (hereinafter called the "Tender").

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

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

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

5. IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this_____day of_____20_____.

Principal:_____
Corporate Seal (where appropriate)

(Signature)

(Printed name and title)

Surety _____
:

_____

(Signature)

(Printed name and title)

TENDER-SECURING DECLARATION FORM

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

Date: ..... *[insert date* as *day, month and year) of Tender Submission]*
Tender No.: ……*[insert number of tendering process]*
To:. ……. *[insert complete name of Purchaser]*

I/We, the undersigned, declare that:

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

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

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

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

Signed: …….. Capacity / title (director or partner or sole proprietor, etc.)

…….…….....……

Name: …….. Duly authorized to sign the bid for and on

behalf of: ……. *[Insert complete name of*

Tenderer]

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

Schedule of Currency requirements

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

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

SCHEDULE OF CONSTRUCTION MATERIALS BASIC PRICES

(Ref: Conditions of Contract)

Item No.	Description	Country of Origin	Name of Supplier	unit	Unit Price KES.
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 K1-60 in bulk			Litre	
6.	Bitumen Emulsion K1-60 in drums			Litre	
7.	Cut-back Bitumen MC 70 in bulk			Litre	
8.	Cut-back Bitumen MC 70 in drums			Litre	
9.	Petrol, Regular Grade			Litre	
10	Petrol, Premium/ super Grade			Litre	
11	Automotive Diesel Fuel			Litre	
12	Industrial Diesel Oil			Litre	
13	Kerosene Fuel			Litre	
14	Cement			Tonne	
15	Flex beam Guardrail			Metre	
16	Gabion Mesh			M^2	
17	Reinforcing Steel			Tonne	
18	Lime			Tonne	

I certify that the above information is correct.

…… …… ……

(Title) *(Signature)* *(Date)*

The prices inserted above shall be those prevailing 28 days before the submission of Bids and shall be quoted in Kenya Shillings using the exchange rates specified in the Appendix to Form of Tender

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

Transportation costs for imported materials to be quoted from Mombasa or Nairobi as appropriate to mid-point of **TRAFFIC CIRCULATION IMPROVEMENT WITHIN NAIROBI RAILWAY CITY TENDER No.: KURA/URPD/HQ/527/2025-2026** depending on whether materials are imported directly by the Bidder or through a local agent. **Bidders SHALL attach confirmation of prices from the Supplier**

SUMMARY OF SPECIAL CONDITIONS OF CONTRACT

Signature of Tenderer……..……. Date ……

Table: A Approximate Weightings for Price Adjustment

Description of Index	*% Range of Weighting [a]*
(a) Fixed ("A")	8
(b) Labour	10-15
(c) Fuels and Lubricants	15-25
(d) Equipment and Spares	15-25
(e) Cement	10-15
(f) Reinforcement and Steel products	5-10
(g) Explosives	1 – 5
(h) Bitumen and Bituminous products	15 – 18
Total	100

NOTE: [a] Denotes that this should be used as guidance to bidders and for purpose of checking their submissions, the Employer has estimated and provided a range of acceptable weightings for related major construction inputs in accordance with the potential range of construction methodologies, based on estimated cost in a common currency.

Table B:Bidder's proposed weighting

Index Code	*Index Description*	*Source of Index*	*Base value and date*	*Bidder's proposed weighting*
	Non adjustable	Civil Engineering Cost Indices from Kenya National Bureau of Statistics. For equipment & spares, the official indices from source country shall apply	The Indices prevailing at 28days before tender submission deadline shall apply	a:_____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____
			Total	1.00

Signature of Bidder……..……Date ……

(Failure to sign this appendix will imply the bidder doesn't accept the above conditions and hence disqualified)

8. COMMITMENT TO PROVIDE BENEFICIAL OWNERSHIP INFORMATION

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

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

2. THAT I do hereby commit to provide Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form to the procuring entity upon receipt of notification of award in the event we are the successful tenderer in this subject procurement proceeding. I fully understand that failure to furnish the procuring entity with the Beneficial Ownership Information within the period provided for in the letter of award shall invalidate my award and may considered as refusal to enter into a written contract which is punishable under Section 41(1) (e) of the Public Procurement and Asset Disposal Act, 2015.

Name of the Firm/Company……..

Registered Physical Address of the Company……...

Posta Address……

Telephone No…… Mobile Number …….....

Email Address ……...

Name of Authorised Signatory……..

Designation ……...

Signatory……

Date……...…….

Witnessed by …….

Signature of Witness……..

Date……

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 pursuant to Regulation 4 of the Companies (Beneficial Ownership Information) (Amendment) Regulations, 2022. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.*
>
> *For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.*

Tender Reference No.:_____[*insert identification no*] Name of the Tender Title/Description:

_____*[insert name of the assignment]* to:__*[insert complete name of Procuring Entity]*

In response to the requirement in your notification of award dated_____*[insert date of notification of award]* to furnish additional information on beneficial ownership:_____*[select one option as applicable and delete the options that are not applicable]*

I) We here by provide the following beneficial ownership information.

Details of beneficial ownership

	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights a person holds in the company**	**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)**	**directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)**
	Full Name		Directly~~~~~~~~~~~ % of shares	Directly……. % of voting rights		
	National identity card number					

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	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)	directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)
1.	or Passport number		Indirectly---------- % of shares	Indirectly---------- % of voting rights		
	Personal Identification Number (where applicable)					
	Nationality					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
2.	Full Name		Directly---------- % of shares Indirectly---------- % of shares	Directly……. % of voting rights Indirectly---------- % of voting rights		
	National identity card number or Passport number					
	Personal Identification Number (where applicable)					
	Nationality					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	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)	directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)
3.						
e.t.c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 5 of the Companies (Beneficial Ownership Information) (Amendment) Regulations, 2022

III) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer: .....[insert complete name of the Tenderer]*_____

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

Designation of the person signing the Tender: ..... [insert complete title of the person signing the Tender]

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

Date this ..... [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp/ Company Seal.

PART II ~ WORK REQUIREMENTS

SECTION V - DRAWINGS

A list of drawings should be inserted here. The actual drawings including Site plans should be annexed in a separate booklet.

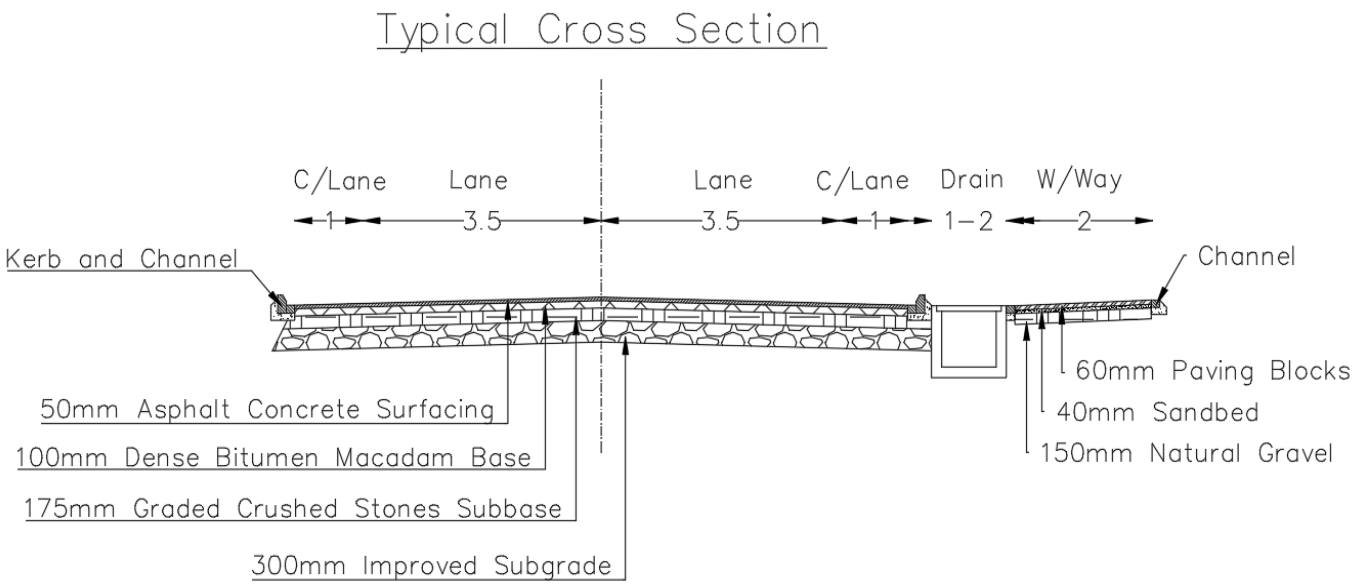
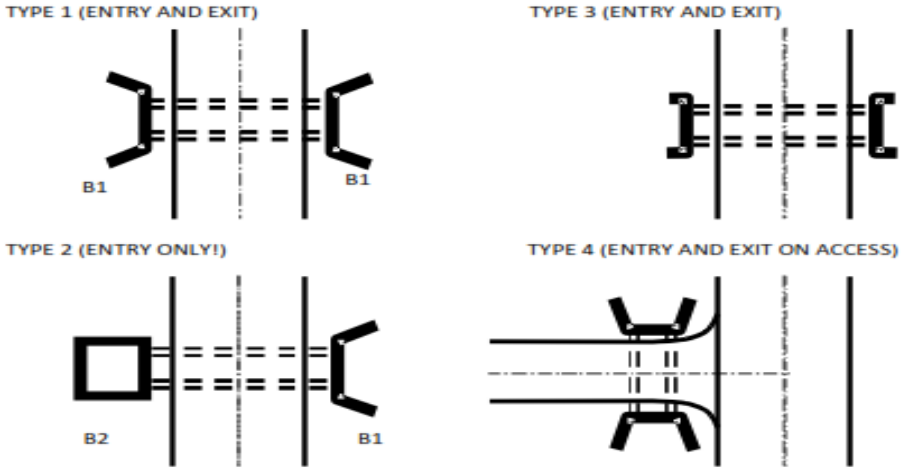


FIGURE C.1 - CULVERT ENTRY / EXIT STRUCTURE TYPES



NOTE:

Coding system has been used in describing the standardised designs of the various culvert entry and exit structures. The code names consist of a number to specify shape and function as elaborated in above while the used construction materials are identified through an alphabetic symbol as follows:

A = Concrete block
B = Stone masonry
C = Dressed stones

An example code of "B2" would therefore stand for a drop inlet type structure to be built in stone masonry.

FIGURE C.2 - HEADWALL TYPE 1 (HEAD AND WINGWALLS)

PIPE DIAMETER (IN MM)			MATERIAL REQUIREMENTS									
			TYPE A (CONCRETE BLOCKS			TYPE B (STONE MASONRY)						
	DIMENSION	UNIT	450	600	900	450	600	900				
a	FOUNDATION	m	0.30	0.30	0.30	0.40	0.40	0.60				
B	FOUNDATION	M	0.30	0.30	0.40	0.30	0.30	0.40				
c	FOUNDATION		2.20	2.35	2.89	2.20	2.35	2.89				
d	APRON	m	1.00	1.00	1.20	1.00	1.00	1.20				
e	APRON	m	0.20	0.20	0.20	0.20	0.20	0.20				
f	WALL	m	0.20	0.20	0.20	0.40	0.40	0.40				
g	WALL	m	0.30	0.30	0.30	0.30	0.30	0.30				
h	WALL	m	1.15	1.15	1.39	1.15	1.15	1.39				
i	WALL	m	0.20	0.20	0.20	0.40	0.40	0.40				
k	APRON	m	1.05	1.20	1.50	1.05	1.20	1.50				
MATERIAL REQUIREMENT												
FOUNDATION												
(Concrete		m³	0.3	0.32	0.51	0.4	0.42	1.03				
HEAD/WINGWALLS												
(Concrete/Masonry)		m³	0.4	0.47	0.67	0.8	0.93	1.35				
APRON												
(Concrete		m³	0.33	0.36	0.53	0.33	0.36	0.53				

CULVERT PIPES	
X-SECTION WIDTH	No. of Pipes
4.50	6.00
5.50	7.00
6.50	8.00

FIGURE C.3 - HEADWALL TYPE 2 (DROP INLET)

DIMENSIONS AND MATERIAL REQUIREMENTS

PIPE DIAMETER IN (M)			TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
	DIMENSION	UNIT	450	600	900	450	600	900
a	FOUNDATION	m	0.30	0.30	0.30	0.40	0.40	0.40
B	FOUNDATION	M	0.30	0.30	0.30	0.30	0.30	0.30
c	FOUNDATION	m	1.10	1.10	1.40	1.20	1.20	1.50
d	APRON	m	0.60	0.60	0.90	1.00	1.00	1.00
e	APRON	m	0.20	0.20	0.20	0.20	0.20	0.20
f	DROP INLET	m	0.60	0.60	0.60	0.60	0.60	0.60
g	DROP INLET	m	0.30	0.40	0.60	0.30	0.40	0.60
h	DROP INLET	m	0.60	0.60	1.20	0.60	0.80	1.20
I	DROP INLET	m	0.20	0.20	0.20	0.40	0.40	0.40
k	DROP INLET	m	1.20	1.20	1.50	1.20	1.20	1.50
l	DROP INLET	m	1.00	1.00	1.00	1.00	1.00	1.00
m	DROP INLET	m	0.36	0.30	0.30	0.36	0.30	0.30
MATERIAL REQUIREMENT								
FOUNDATION (Concrete)		m^3	0.47	0.47	0.52	0.72	0.72	0.79
HEADWINGWALLS (ConcreteMasonry)		m^3	0.53	0.69	1.11	1.24	1.63	2.61
APRON (Concrete)		m^3	0.24	0.24	0.30	0.24	0.24	0.30

FIGURE C.4 - HEADWALL TYPE 3A (CONCRETE BLOCK HEADWALLS)

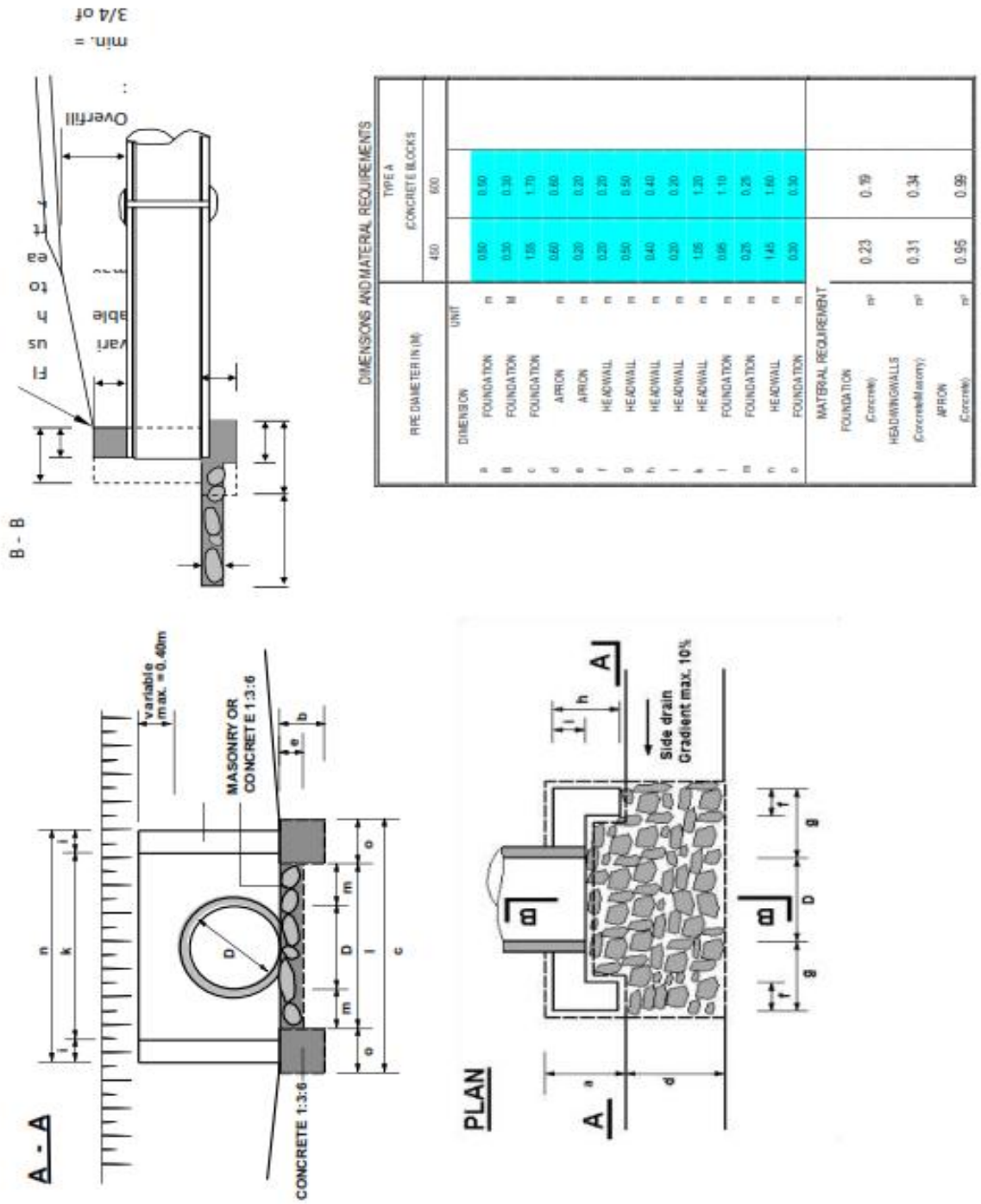
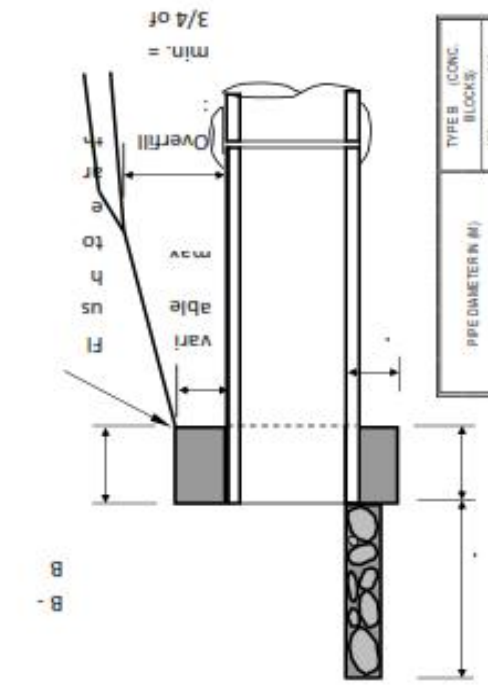
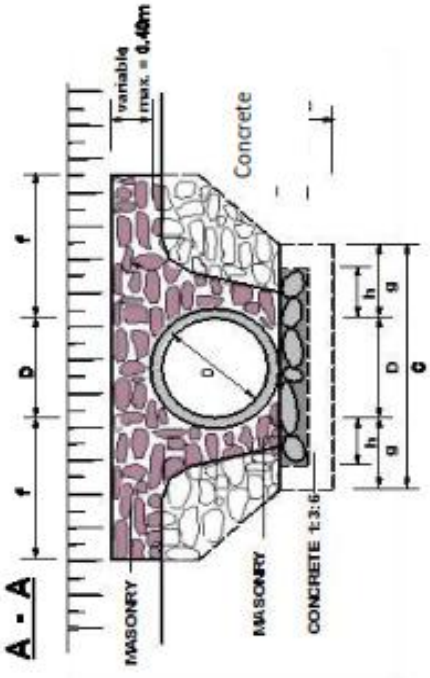


FIGURE C.5 - HEADWALL TYPE 3B (STONE MASONRY HEADWALLS)



PIPE DIAMETER IN (M)			TYPE B (CONC. BLOCKS)	
			450	600
	DIMENSION	UNIT		
a	FOUNDATION	m	0.40	0.40
b	FOUNDATION	m	0.30	0.30
c	FOUNDATION		1.65	1.70
d	APRON	m	0.60	0.60
e	APRON	m	0.20	0.20
f	HEADWALL	m	0.75	0.75
g	HEADWALL	m	0.50	0.50
h	HEADWALL	m	0.30	0.30
i	HEADWALL	m	0.40	0.40
m	FOUNDATION	m	1.05	1.20
MATERIAL REQUIREMENT				
FOUNDATION (Concrete 1:3:6)		m³	0.19	0.2
HEADWINGWALLS (Concrete/Masonry)		m³	0.62	0.69
APRON (Concrete 1:2:4)		m³	0.19	0.22



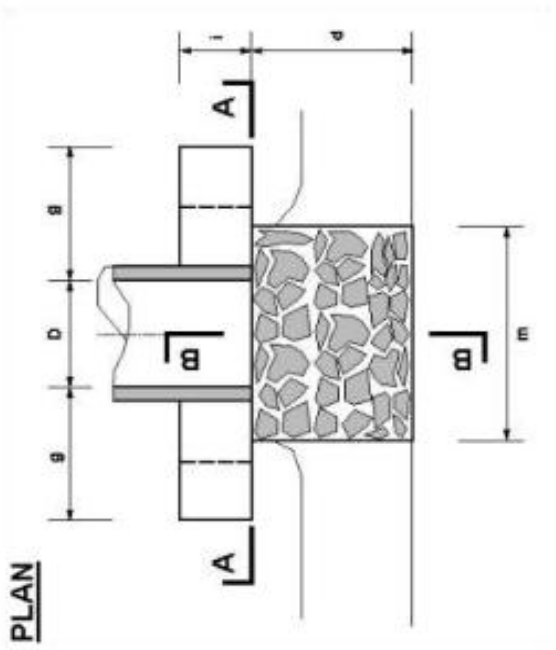


FIGURE C.6 - HEADWALL TYPE 4 (FOR ACCESS CULVERTS)

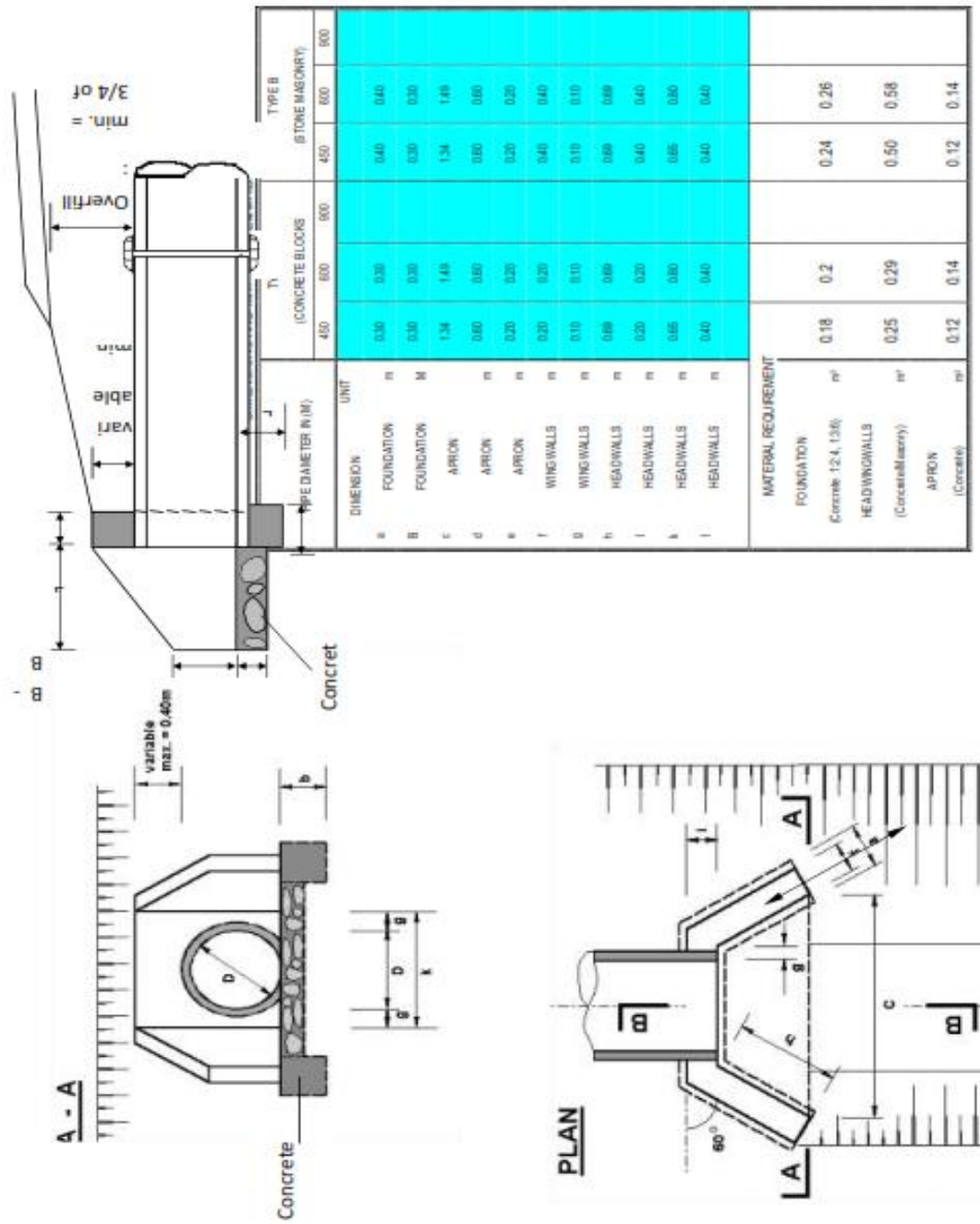
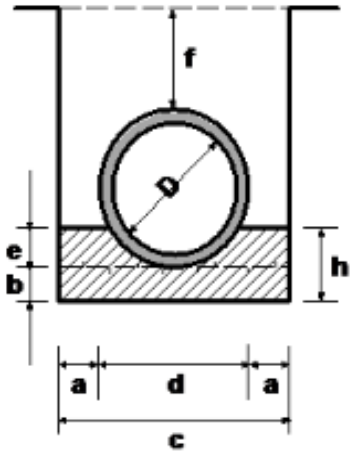


FIGURE C.7- BEDDING AND HAUNCH PROFILES TYPES I & II

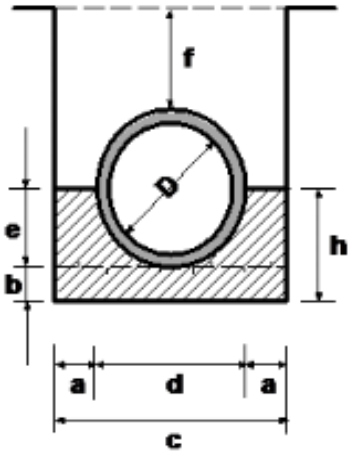
PROFILE I

(CONCRETE)



PROFILE II

(CONCRETE)



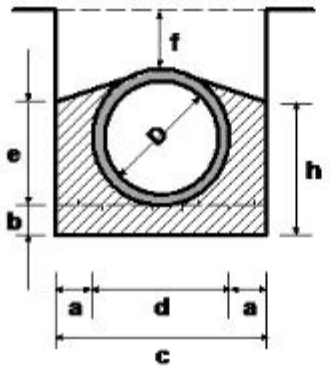
Diameter (D)	450 (mm)	600 (mm)	900 (mm)
	Dimensions in (m)		
a	0.15	0.2	0.2
b	0.1	0.15	0.15
c	0.86	1.12	1.48
d	0.56	0.72	1.08
e	0.14	0.18	0.27
f (min.)	0.34	0.45	0.68
g	-	-	-
h	0.24	0.33	0.42
i	-	-	-
Concrete	Volume in (m3/m)		
	0.16	0.3	0.48
Application	- Fair subgrade condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
Remarks	- Use gravel material for back/ overfill.		

450 (mm)	600 (mm)	900 (mm)
Dimensions in (m)		
0.15	0.2	0.2
0.1	0.15	0.15
0.86	1.12	1.48
0.56	0.72	1.08
0.28	0.36	0.54
0.34	0.45	0.68
-	-	-
0.38	0.51	0.69
-	-	-
Volume in (m3/m)		
0.2	0.37	0.56
- Fair to poor subgrade Condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
- Use gravel material for back/ overfill.		

FIGURE C.8 - BEDDING AND HAUNCH PROFILES TYPES III & IV

PROFILE III

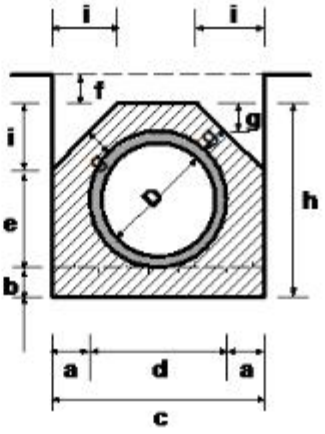
(CONCRETE)



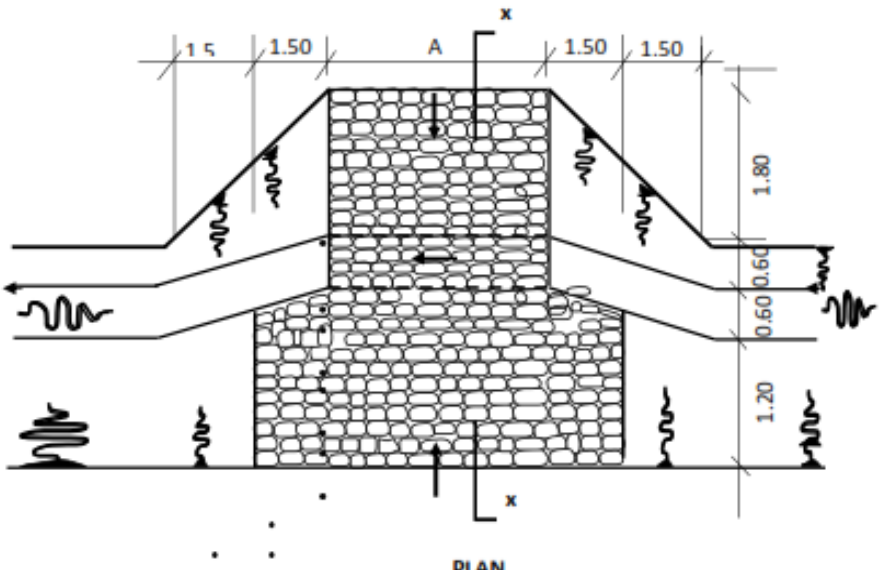
Diameter (D)	450 (mm)	600 (mm)	900 (mm)
	Dimensions in (m)		
a	0.15	0.2	0.2
b	0.1	0.15	0.15
c	0.86	1.12	1.48
d	0.56	0.72	1.08
e	0.42	0.54	0.81
f (min.)	0.23	0.3	0.45
g	-	-	-
h	0.52	0.69	0.96
i	-	-	-
Concrete	Volume in (m3/m)		
	0.26	0.47	0.71
Application	- Fair subgrade condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
Remarks	- Use gravel material for back/ overfill.		

PROFILE IV

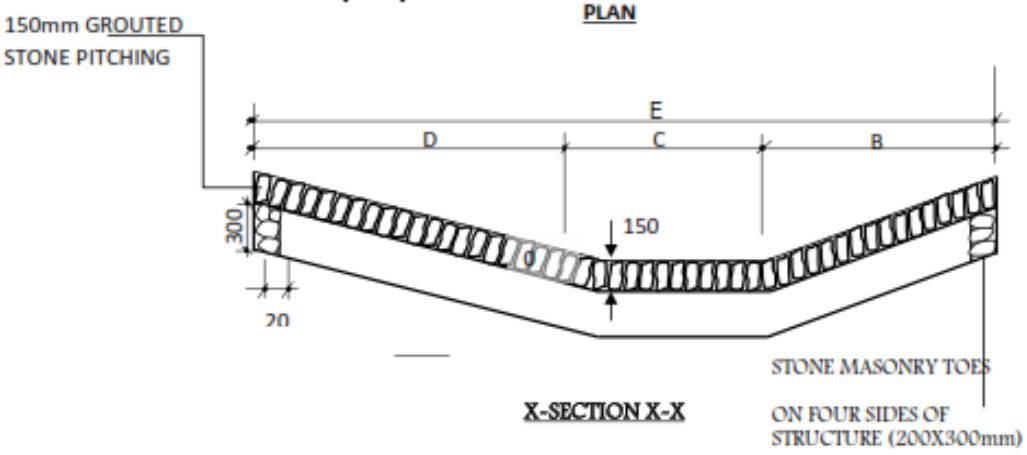
(CONCRETE)



450 (mm)	600 (mm)	900 (mm)
Dimensions in (m)		
0.15	0.2	0.2
0.1	0.15	0.15
0.86	1.12	1.48
0.56	0.72	1.08
0.46	0.52	0.78
0.15	0.15	0.15
0.15	0.15	0.15
0.81	1.02	1.38
0.28	0.35	0.45
Volume in (m3/m)		
0.37	0.61	0.92
- Fair to poor subgrade Condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
- Use gravel material for back/ overfill.		



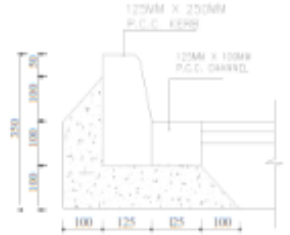
PLAN



X-SECTION X-X

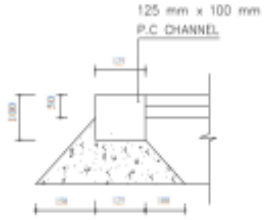
QUANTITIES TABLE

Cross section	DIMENSIONS					RED Excavation (m3)	Stone masonry (m³)	150mm Grouted stone pitching (m3)
	A	B	C	D	E			
A	4000	1600	600	1600	4200	7.50	1.30	21.75
	6000	1600	600	1600	4200	10.00	1.60	30.15
B	4000	1400	400	1600	3600	7.00	1.20	18.30
	6000	1400	400	1600	3600	9.00	1.50	25.50



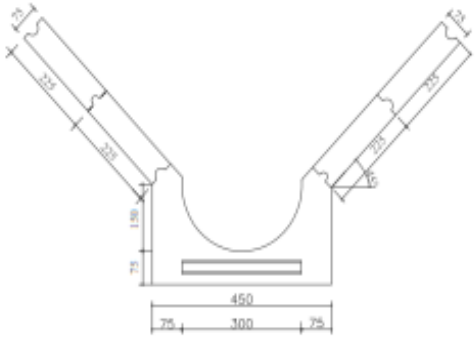
P.C.C. KERB AND CHANNEL

SCALE 1:10



P.C.C. CHANNEL AND HAUNCH

SCALE 1:10



DIA. 300MM INVERT BLOCK DRAIN
SIDE SLABS VARIES

SCALE 1:10

SECTION VI ~ SPECIFICATIONS

Notes for preparing Specifications

1. Specifications must be drafted to present a clear and precise statement of the required standards of materials, and workmanship for tenderers to respond realistically and competitively to the requirements of the Procuring Entity and ensure responsiveness of tenders. The Specifications should require that all materials, plant, and other supplies to be permanently incorporated in the Works be new, unused, of the most recent or current models, and incorporating all recent improvements in design and materials unless provided otherwise in the Contract. Where the Contractor is responsible for the design of any part of the permanent Works, the extent of his obligations must be stated.

2. Specifications from previous similar projects are useful and may not be necessary to re-write specifications for every Works Contract.

3. There are considerable advantages in standardizing **General Specifications** for repetitive Works in recognized public sectors, such as highways, urban housing, irrigation and water supply. The General Specifications should cover all classes of workmanship, materials and equipment commonly involved in constructions, although not necessarily to be used in a particular works contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

4. Care must be taken in drafting Specifications to ensure they are not restrictive. In the Specifications of standards for materials, plant and workmanship, existing Kenya Standards should be used as much as possible, otherwise recognized international standards may also be used.

5. The Procuring Entity should decide whether technical solutions to specified parts of the Works are to be permitted. Alternatives are appropriate in cases where obvious (and potentially less costly) alternatives are possible to the technical solutions indicated in tender documents for certain elements of the Works, taking into consideration the comparative specialized advantage of potential tenderers.

6. The Procuring Entity should provide a description of the selected parts of the Works with appropriate reference to Drawings, Specifications, Bills of Quantities, and Design or Performance criteria, stating that the alternative solutions shall be at least structurally and functionally equivalent to the basic design parameters and Specifications.

7. Such alternative solutions shall be accompanied by all information necessary for a complete evaluation by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, and other relevant details. Technical alternatives permitted in this manner shall be considered by the Procuring Entity each on its own merits and independently of whether the tenderer has priced the item as described in the Procuring Entity's design included with the tender documents.

SECTION VI –A: STANDARD SPECIFICATIONS

Standard Specifications refers to the **Part 2 Standard Specifications for Roads and Bridge Construction, published by the Ministry of Roads and Transport of the Republic of Kenya, 2025 Edition** and shall be applicable in this contract.

SECTION 5: SPECIAL SPECIFICATIONS

SERIES 1000 – GENERAL

1101 KENYA ROAD MANUAL SYSTEM

This specification was prepared by the Ministry of Roads and Transport as part of a series of manuals that incorporate best practices, climate change considerations, and recent technologies thereby enabling the provision of road infrastructure that is safe, secure and efficient

1104 COVERAGE

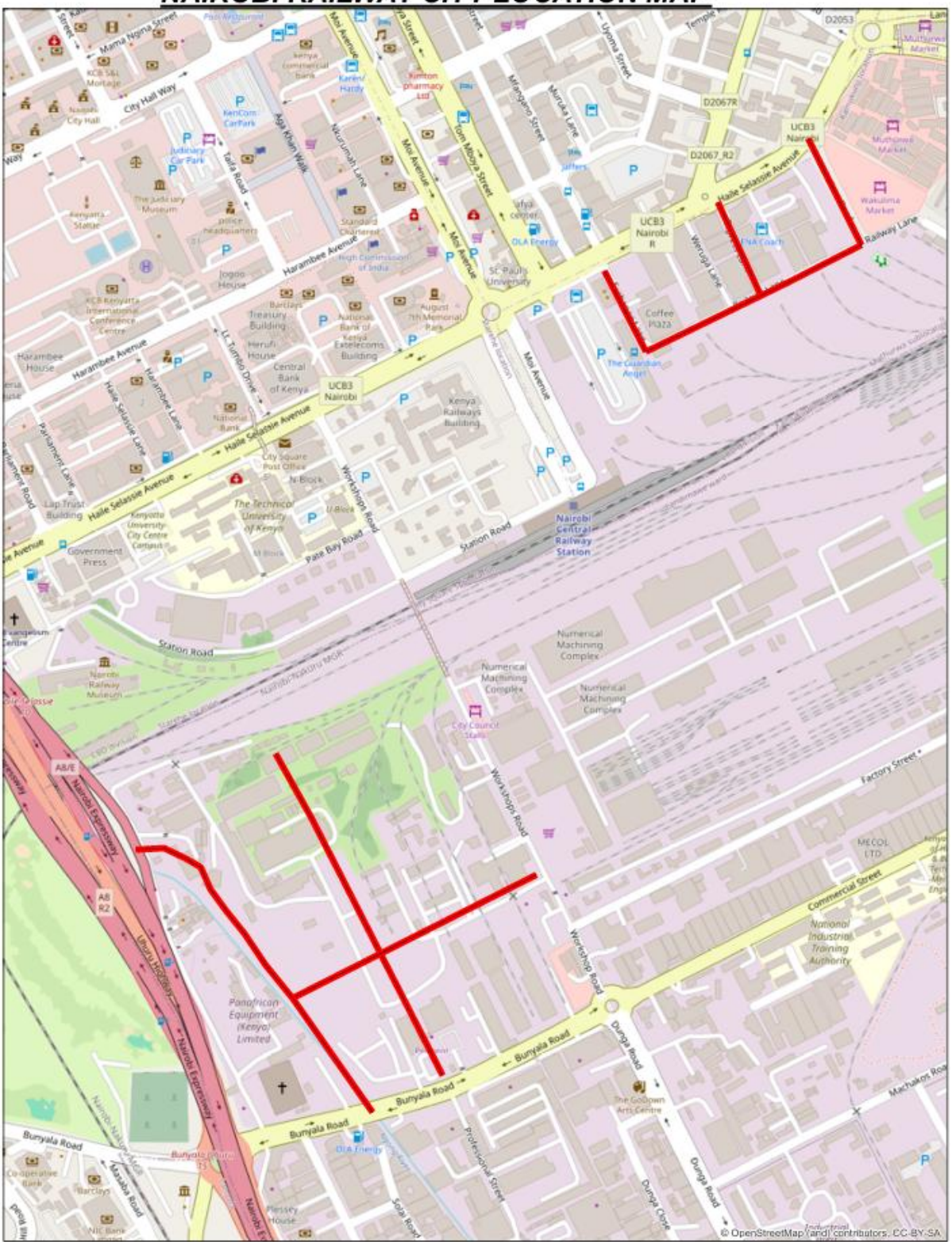
The General Specifications are to be read together with modifications, additions or amendments which are written in the Special Specifications which shall take precedence.

1201 LOCATION OF CONTRACT

The project roads are located in Starehe Constituency in Nairobi County. The length and the Map are as shown below.

S/NO	Road Name	Road Length(km)
1.	TRAFFIC CIRCULATION IMPROVEMENT WITHIN NAIROBI RAILWAY CITY IN NAIROBI COUNTY	3.55
	TOTAL	3.55

NAIROBI RAILWAY CITY LOCATION MAP



1202 EXTENT OF CONTRACT

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

1. Road Works
   - Facilitation of supervision staff
   - Site clearance and Top soil stripping
   - Carriageway 7m, Cycle Lane 1m and 2m Walkway on one side
   - Earthworks to formation level including reprocessing existing road and topping up to achieve formation level using natural gravel or suitable fill
   - Provision of rock fill (where applicable)
   - Construction of pavement structure along existing alignment as follows:
     a) **Surfacing**: 50mm Type I Asphalt Concrete

b) **Base**: Dense Bitumen Macadam (100mm)
c) **Subbase**: Cement stabilized GCS material (175mm)
d) **Subgrade**: S4 Natural Material (300mm)

- Road furniture

2. Drainage Works
   - Construction of pipe and box culverts and other drainage works
   - Drain and culvert cleaning
   - Protection works: Stone pitching and bed drain lining etc.
   - Construction of Invert Block Drain with two levels of side slab
3. Maintenance of passage of traffic through and around the works.
4. Relocation of services.
5. Maintenance during Contract Period – Defect Liability Period shall be 12 months of works

Any other activity not listed above in either category but deemed to be necessary by the Engineer, shall be subject to the Engineer's formal instructions within the mode of payment stipulated either by day works or on a measured basis.

1204 POSSESSION OF THE SITE AND ACCESS THERETO

The Site will be handed over to the Contractor for construction in accordance with the relevant clause of the Conditions of Contract and subject to such conditions as may be provided in the Special Specifications regarding matters such as the sequence in which the Contractor will be given possession of sections of the site and the time for completion.

1205 PROGRAMME OF WORKS

In accordance with relevant clauses of the Conditions of Contract, the Contractor shall submit a fully detailed and time related programme, showing the order of procedure and method in which they propose to carry out the Works. The Contractor shall supply, together with a programme, a linked cash flow forecast chart showing their monthly anticipated quantities of work, expenditure and income.

1207 SUBMISSIONS TO THE ENGINEER

Wherever the Contractor is required to submit to the Engineer proposals, details, drawings, calculations, information, literature, materials, test reports and certificates, the Engineer will consider each submission and, if appropriate, will reply to the Contractor in accordance with the relevant provisions of the Conditions of Contract.

1212 METHOD OF WORKING

The Contractor shall submit to the Engineer not later than 28 days from the date of award of the Contract a general description of their proposed arrangements and methods for the execution of the Works, including inter alia temporary offices, buildings, access roads, deviations, Constructional Plant and its intended production output, working shift arrangements, labour strength, skilled and unskilled and supervision arrangements, power arrangements, supply of materials, stone crushing, aggregate production and storage, cement handling, concrete mixing and handling, methods of excavation, dealing with water, testing methods and facilities.
The Engineer's normal working hours shall be defined as 8.00 a.m to 5.00 p.m on weekdays with Saturdays and Sundays to be treated as rest days. If the Contractor wishes to execute permanent Works outside these hours, they shall obtain the written permission of the Engineer at least one full working day in advance to enable the Engineer to make provision for supervision of such work, the cost of which shall be borne by the Contractor.

1212 NOTICE OF OPERATIONS

No operation shall be carried out without full and complete notice having been given to

the Engineer by the Contractor sufficiently in advance of the time of the operation to enable the Engineer to make such arrangements as they may deem necessary for its inspection and checking.

The Contractor shall give the Engineer not less than ONE full working days' notice in writing of their intention to set out or give levels for any part of the Works in order that arrangements may be made for checking. The Contractor shall also give prompt notice of completion of SECTIONS of work to allow time for the Engineer to undertake all necessary control tests prior to giving the Contractor approval to proceed with subsequent works. Under no circumstances will the execution of such testing be construed as a delay to the Contractor's programme of work.

1214 LAND ACQUISITION

Notwithstanding Clause 1214 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 therefrom. On or before completion of the Contract, the Contractor shall remove all temporary works and shall restore all such land to the condition in which it was immediately prior to the occupation thereof as far as is reasonable and practicable. No separate payment will be made to the Contractor on account of these items and the Contractor must make due allowance for them in his rates.

Notwithstanding Clause 1227 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

1215 SERVICES

a) Location of Services

The Contractor shall review the positions of all existing services, such as drains, underground and overhead telephone and electricity lines, ducts, poles, water mains, fittings, railway lines, etc. before any excavation or other work likely to affect the existing services is commenced.

b) Damage to Services

The Contractor shall be held responsible for damage to existing works or services, and shall indemnify the Employer against any claims in this respect (including consequential damages). The Contractor shall be responsible for the reinstatement of the services so affected.

d) Relocation of Services

All services within the road reserve to be affected by the works shall be relocated by the owners at their own cost unless stated otherwise in the wayleave agreements executed between such owners and Road Agencies.
When relevant, a Provisional Sum for such relocation work will be included in the Bill of Quantities and the Contractor shall be reimbursed their actual expenditure plus overhead and profit.

g) Payment

Any work required to be undertaken by the Contractor in protecting, altering or relocating public services for which no provision is made in the Contract Documents, will be classified and paid for at Daywork Rates, or if no applicable Daywork Rates exist, the Contractor shall submit a quotation for the Engineer's approval.

1220 THE SETTING OUT OF WORK AND PROTECTION OF BEACONS

The Engineer will provide sufficient basic survey information to enable the Contractor to set out the Works and the Contractor shall be responsible for setting out all necessary reference points and for the maintenance thereof.

Prior to commencing construction, the Contractor shall establish the road reserve boundary posts in accordance with CLAUSE 2001 of this Specification or if no boundary posts are instructed then the Contractor shall establish reference points to define the road reserve at 100 m intervals on both sides.

1223 HEALTH, SAFETY AND ACCIDENTS

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

1227 PROTECTION OF EXISTING WORKS AND SERVICES

The Contractor shall acquaint himself with the position of all existing services such as sewers, water drains, cables for electricity and telephone, lighting and telephone poles, water mains, etc., before commencing any excavation or other work likely to affect the existing services.

The cost of all plant, equipment and materials, labour, technical and professional staff, transport and the like necessary for determining the locations of existing services, including the making good of any damage caused to such services all to the satisfaction of the Engineer, shall be deemed to be included in the tender rates. No other payment shall be made for the costs of such operations, nor for the making good of damage caused thereby to the existing services.

The Contractor shall be held responsible for injury to existing structures, works or services and shall indemnify and keep indemnified the Employer against any claims in this respect (including consequential damages).

1228 DIVERSION OF SERVICES

The Contractor shall be responsible for arranging in liaison with the appropriate Authority as soon as the requirement is known for the moving of or alterations to services such as power and telephone lines, water mains, sewers and surface water drains which are affected by the Works. The arrangements for such moving or alteration shall be subject to the agreement of the Engineer and the appropriate Authority.

1239 ROADS AND SITE TO BE KEPT TIDY

The Contractor shall take all necessary care and precautions to ensure that roads and thoroughfares used by him either for the construction of the Works or for the transport of equipment, labour and materials are kept in good repair and condition and not damaged or made untidy as a result of such construction or transport. In the event of their becoming damaged or made untidy, in the opinion of the Engineer, the Contractor shall immediately take all necessary steps to repair or clean as required by the Engineer.

1241 HEALTH AND SAFETY

The Contractor shall comply with all Health and Safety Regulations and the particular requirements of **SECTION 9200** of these Specifications.

1242 NOTICES, SIGNS AND ADVERTISEMENTS

The Contractor and subcontractors shall not erect any signs, notices or advertisements on or along the Works or the site of the works without the approval of the Engineer or according to format given by the Engineer.
At each end of the Works the Contractor shall provide and erect, as part of their obligations under **SECTION 1300**, and on approved locations, at the starting and ending points of the Works, sign boards of sound, weather proof construction, painted by an

approved firm of sign writers in accordance with the details shown on the Drawings or the description in **SUBCLAUSE 1302(c)** of these Specifications.

1245 FINAL CLEARANCE

Upon completion of each section of the Works the Contractor shall remove all temporary buildings, plant and debris, remove or level off and fine grade all excavated material which is surplus to requirements and ensure that the whole of the site is in a clean and workmanlike condition to the satisfaction of the Engineer.
No separate payment shall be made for any such work, the costs for which shall be deemed to be included in the rates of the relevant Items entered in the Bill of Quantities.
The provisions of **SECTIONS 9100**, **8600** and **8700** of these Specifications shall be observed where applicable.

SECTION1400 ENGINEER'S SITE ESTABLISHMENT

1402 FACILITIES FOR THE ENGINEER

The contractor, when instructed, shall for the duration of the Contract, furnish and equip Resident Engineer's office located at the KURA's Regional offices. 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. 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 and maintenance of the telephone shall be deemed to have been included in the rates for providing and maintaining the Office. The Contractor will be reimbursed, separately, the cost of operating the telephone under appropriate bill item in the BoQ.
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 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.

1407 FACILITIES FOR THE ENGINEER

The Contractor shall provide new diesel propelled vehicles or equivalent as listed below licensed and comprehensively insured for replacement value and shall maintain and provide fuel, oil and replacement parts during the whole of the Contract period. The vehicles shall be for the exclusive use of the Engineer, their staff and the Employer during the Contract period. The quantities of vehicles to be supplied shall be as defined in the Special Specifications. The Contractor shall insure the vehicles and passengers fully comprehensively for any driver at all times throughout the Contract Period.
a. 4 Wheel Drive Station Wagon with a minimum engine cubic capacity of 3.2 litres
b. 4 Wheel Drive Pickup, with double cabin with a minimum engine cubic capacity of 2.8 litres
c. 4 Wheel Drive Pickup, with single cabin with a minimum engine cubic capacity of 2.8 litres
d. 2-wheel drive saloon vehicle with a minimum engine capacity of 1.8 litres
e. 2-wheel drive 11-seater van with a minimum engine capacity of 1.8 litres.

1408 ATTENDANCE UPON THE ENGINEER

In addition to Section **1408**, the following staff will be provided for the supervision of work:
2No. General Attendants,
1No. Surveyor,
2No. Office assistants,
1No. Lab attendants. Additional attendant staff, as required by the Engineer, shall be paid

for under 2Item 01-80-030 of the Bill of Quantities.

1409 PROVISION OF SURVEY EQUIPMENT

The survey equipment to be provided would include:

1. Engineer's automatic level Wild NAK 2 or similar	2No
2. Total station reading 1" with tripod and setting on pole with datalogger and survey software to match Total Station Datalogger. Include data transfer program, and plotting modes, setting out calculations and Cogo facilities	1No
3. Levelling staff 5m. with levelling bubble Wild GNLE or similar	4No
4. 50m. steel band measuring tape	2No
5. 30m. linen measuring tape	2No.
6. 3m. aluminum straight edge	2No
7. 1m. stainless steel straight edge	1No
8. 100m. steel band tape	2No.
9. Draughtsman's stool	3No.
10. Complete set of highway curves	1No
11. Programmable scientific calculators FX 880P or equivalent	4No
12. Survey umbrella	2No.
13. Roll of tracing paper	10No
14. Protractor 360	2No
15. Graph paper A3 size	100No
16. Drawing table	2No.
17. Erasing shield	4No.
18. 3m. ranging rods	9No
19. Marker pens	30No.

The Contractor shall be solely responsible for the maintenance of all such instruments and shall ensure that they are at all times in good condition and adjustment. Repairs shall only be carried out by persons or organizations approved by the Engineer.

1410 LABORATORY FOR THE ENGINEER

All tests to shall be carried out in Garissa at the MTRD Laboratory.

SECTION 1700 TESTING OF MATERIALS AND WORKMANSHIP

All materials testing shall be in accordance with Section 1700 of the Standard Specifications.

SECTION 1800 QUALITY CONTROL

1802 GENERAL

Tests shall be conducted and measurements taken to check the relevant properties of the materials and workmanship and the results of such tests and measurements shall be assessed on the basis of the prescribed criteria for compliance with the specified requirements.

1806 ROUTINE TEST AND INSPECTION BY THE ENGINEER

The Engineer will at regular intervals inspect and test materials and completed work for compliance with the specified requirements and where applicable the various specified statistical analyses will be applied.

1807 QUALITY CONTROL BY THE CONTRACTOR

The requirements of Clause 1706 shall apply in respect of the Contractor's obligation to institute and implement Quality Control systems for the specific processes detailed in TABLE 1806/1. The process control systems shall provide for monitoring the quality of the work and materials supplied.

SECTION 1900 SETTING OUT & TOLERANCES

1902 GENERAL

The Engineer will provide sufficient basic survey information to enable the contractor to set out the works and the Contractor shall be responsible for setting out all necessary reference points and for the maintenance thereof.
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 coordinated 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 2 Kms of the road.

1903 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.

1904 TOLERANCES: PAVEMENTS

All Pavement tolerances shall be in accordance with Clause 1904.

SERIES 2000 EARTHWORKS

SECTION 2100 DRAINS

2101 SCOPE OF SECTION

This Section covers all work in connection with the excavation, construction and testing of open drains at the locations and to the sizes, shapes, grades and dimensions as shown on the Drawings or as directed by the Engineer

2102 OPEN DRAINS

Open-drain excavation shall involve the excavating of open drains and channels, including channels to direct the course of streams, all as shown on the Drawings or as directed by the Engineer.
Any excavation required for constructing a channel or open drain within the road prism, such as median drains, side drains and open drains on excavation-slope benches, shall be classed as Excavation in soft material or Excavation in hard material as defined in **CLAUSE 3503** and shall be measured and paid for under **SECTION 3500.**

SECTION 2200 PREFABRICATED CULVERTS

2201 SCOPE OF SECTION

This section covers work in connection with the construction from prefabricated units of culvert and other closed conduits such as storm water and service ducts, together with inlet and outlet structures, manholes and other ancillary structures.

2203 MATERIALS

The prefabricated culvert units shall be factory produced by a reputable manufacturer of these articles and shall comply with the following requirements:

a. Prefabricated concrete pipe culvert units

Prefabricated concrete pipe culvert units shall comply with the requirements of BS 5911-1 and BS EN 1916 or equivalent. Pipes with ogee joints shall be provided, unless otherwise specified.
In addition to this all the culvert units should comply with **Clause 2203**.

2205 EXCAVATION FOR CONSTRUCTION BY THE TRENCH METHOD

a. Depth of Excavation

In the case of culverts to be constructed by the trench method, the Contractor shall first construct the fill, subgrade and if necessary, the sub-base to such level of the top of the culvert, as described herein after for the various types of culvert. The Contractor may then commence excavating the trench for the culvert.

i. Concrete pipe culverts

The minimum height of embankment construction over the top of the proposed pipe culvert before excavation may be commenced, shall be the minimum cover specified on the Drawings for the type of pipe and bedding onto which it shall be laid.
The minimum amount by which the excavation is to exceed the proposed level of the bottom side of the pipe shall be 75 mm or such other as may be required for accommodating the type of bedding required for the pipe in each case.

2208 CLASSIFICATION OF EXCAVATION

All excavations for prefabricated culverts shall be classified as provided in CLAUSE 3503 for payment purposes.

2210 LAYING AND BEDDING OF PREFABRICATED CULVERTS

a. Concrete Pipe Culverts

Concrete pipe culverts shall be laid on Class A, B, D, F, N or S bedding as shown on the Drawings or as directed by the Engineer. The pipe ends shall be laid hard up against each other so as to obtain tight joints. Ogee pipes shall be laid with their spigot ends downstream. The joints shall be sealed on the outside with two layers of bitumen impregnated burlap as specified in **SUBCLAUSE 2210(b).**
The insides of the culvert shall be smooth and without any displaced joints. All pipes shall be laid true to line and level.

d. Extension of Existing Culverts

Where an existing culvert requires extension or partial replacement, the new section shall be placed at the same grade and level where it joins the existing structure.
Any sections of existing wing walls, approach slabs and head walls which may obstruct any work shall be demolished and removed. If damage occurs to existing culvert ends the repair work shall be done before the placement of any fresh concrete or new culverts. Loose material shall be removed and joint faces thoroughly cleaned to the satisfaction of the Engineer.
Jointing shall be done in accordance with CLAUSE 2214.

2213 REMOVAL OF EXISTING WORK

Where shown on the Drawings or directed by the Engineer existing inlets and outlets to pipe culverts shall be demolished and debris or rubbish disposed of in an approved waste site as directed by the Engineer. Existing pipes shall be removed where necessary and saved for later use. All such work shall be carried out to prevent damage being done to former work which is to remain.

The Contractor's attention is directed to the provisions of SECTION 3100 which specifies any structures which have to be removed as part of the clearing and grubbing operations, the removal of which will therefore not be measured and paid for under this section.

2214 JOINING NEW WORK TO OLD

In areas where partial demolition is required for extension work to existing structures, the contact face shall be cut to predetermined lines and levels, any loose and fragmented material shall be removed and projecting steel cleaned and bent as directed by the Engineer. Where partial demolition is not required, but extension work only, the contact surface shall be roughened and cleaned of all dirt and loose particles.

2215 SERVICE DUCTS

Where required the Contractor shall construct service ducts for the easy installation and maintenance of existing, new and future cables and other services. Where the service provider is to install such ducts, the Engineer shall instruct that the contractor employed to undertake this work shall comply with the requirements of this clause.
Service ducts shall be constructed with suitable materials in accordance to **Clause 2215.**

SECTION 2300 CONCRETE KERBING, CONCRETE CHANNELLING, OPEN CONCRETE CHUTES AND CONCRETE LININGS FOR OPEN DRAINS.

2301 SCOPE

This SECTION covers the construction of concrete kerbing and channelling, open concrete chutes and concrete linings for open drains at the locations and to the details as shown on the Drawings or as directed by the Engineer.

2302 MATERIALS

a. Concrete

All concrete work shall be carried out in accordance with the requirements of SECTIONS 7200, 7300 and 7400.

b. Kerbing and Channelling

Prefabricated kerbing and channelling shall comply with the requirements of BS EN 1339 and BS EN 1340 or equivalent. Cast in situ kerbing and channelling shall be of the Class C20/25 or of the class indicated on the drawings.

c. Joint Sealant

i. Cold-applied joint sealant shall be conforming to the requirements of BS EN 14188.
ii. Hot applied joint sealants shall comply with the requirements of BS EN 14188-1 or equivalent.
iii. Silicone-based joint sealants shall comply with the requirements of the Special Specifications.

d. Bedding Material

The material on which concrete kerbs and channels are to be bedded shall consist of crushed rock, natural gravel, sand or other approved well graded porous material with a maximum particle size of 14 mm.

Concrete may also be prescribed as bedding material, in which case it shall comply with the requirements of SECTION 7400.

2304 CONSTRUCTION

a. Excavation, and Preparation of Bedding

i. Kerbs and channels

Trenches for kerbs and channels shall be excavated to the required depth and all unsuitable material shall be removed and replaced with a layer of approved bedding material at least 75 mm thick. The bedding shall be compacted and accurately shaped to the required grade. No concrete or precast concrete unit shall be placed on uncompacted or disturbed material. All compaction to a density of not less than 93 % MDD of AASHTO T180 density.

ii. Concrete linings

The excavation work for open drains shall be executed and paid for in accordance with the provisions of SECTION 2100.

The excavations shall then be neatly trimmed to the lines and levels specified so as to permit the accurate construction of the concrete linings. All loose material shall be compacted to a density of not less than 93 % MDD of AASHTO T180 density.

b. Prefabricated Concrete Kerbing and Channelling

Prefabricated concrete kerbing and channelling shall be laid on the approved bedding with close joints filled with 1:3 cement: sand mortar not exceeding 10 mm in thickness and neatly pointed with a pointing trowel. The exposed faces of kerbs and edging shall be constructed true to line and elevation. Kerbing around curves shall first be laid along the full curve length before the joints are filled, unless otherwise allowed by the Engineer.

g. Concrete – lined Open Drains

The exposed surfaces of the concrete linings of open drains shall be given a Class U2 surface finish as defined in **CLAUSE 7209**. Concrete shall be cured in accordance with the requirements of **CLAUSE 7409.**

SECTION 2400 IN SITU CONCRETE CULVERTS

All in situ concrete works for culverts should be in accordance to **Section 2400.**

SECTION 2500 PITCHING, STONEWORK AND PROTECTION AGAINST EROSION

2501 SCOPE

This section covers the furnishing of materials and the construction of a protective covering in stone pitching, cast in situ concrete pitching, masonry or prefabricated concrete blocks on exposed surfaces such as earth slopes, drains and stream banks and beds, as well as heavier protective layers in the form of riprap and the construction of stone masonry for walls, all as shown on the Drawings or ordered by the Engineer.

2502 MATERIALS

a. Stone

i. Pitching

Stone for pitching shall be sound, tough and durable, of size less than 200 mm in minimum dimension. The shapes of the materials used shall be such as to form a stable protective layer of the required thickness. Rounded boulders or cobbles shall not be used on slopes steeper than 2:1 unless grouted.

All material intended for use on a particular pitching job shall be subjected to the prior approval of the Engineer.

b. Cement

Cement shall be common cements which comply with the requirements of KS EAS 18-1 or equivalent standard on approval of the Engineer.

c. Sand

i. Sand for concrete Sand for concrete, cement grout and cement mortar shall comply

with the requirements of AASHTO M6-08 or equivalent. Tests for quality shall be performed in accordance with the standard methods given in TABLE 1711/1.

ii. Sand bedding Sand for bedding used for paving blocks shall not contain any deleterious impurities and shall comply with the grading requirements in TABLE 2502/1.

iii. Sand for joints Sand used for brushing into the joints between pavement blocks shall all pass through a 1.18 mm sieve, and between 10 and 15 % of it shall pass through a 0.075 mm sieve.

2503 STONE PITCHING

a. Plain Stone Pitching

The area to be pitched shall be excavated, shaped and trimmed as necessary and thoroughly compacted by mechanical compactor or hand ramming to prevent subsequent settlement. A trench shall be excavated as directed by the Engineer along the toe of any slopes to be pitched or along the unprotected edge of the pitching in the beds of streams. Two pitching methods follow, and the method to be adopted shall be decided on by the Engineer.

b. Grouted Stone Pitching

The work shall be done in accordance with all the requirements specified for plain pitching in SUBCLAUSE 2503(a) above, except that the pitching material shall be thoroughly cleaned of adhering dirt or clay, moistened and embedded in freshly laid cement mortar composed of one part of cement to six parts of sand.

c. Wired and Grouted Stone Pitching

The area to be pitched shall be prepared as described in SUBCLAUSES 2503(a) and 2503(b) and a concrete bed (Class 15 concrete) with a thickness of at least 75 mm shall then be placed. The pitching material shall be of cobbles with a minimum dimension of 200 mm, which shall be laid while the concrete is still fresh.

SECTION 2600 GABIONS

2601 SCOPE

This section covers the construction of gabion walls, aprons, retaining walls, lining channels, revetments, bridge and culvert protection, protection of road embankments and other anti-erosion structures including river training.
Gabions shall be flexible galvanised steel wire and wire-mesh cages packed with boulder or cobble sized rock fragments.

2602 MATERIALS

a. Rock
Rock used as filling for cages shall be clean, hard, un-weathered boulders or cobble size rock fragments. No material shall exceed the maximum size given in TABLE 2602/1, and at least 85 % of the boulders shall be of a size equal to or above the average least dimension size in TABLE 2602/1. The minimum density of rock shall normally be 2,300 kg/m3, though the Engineer may approve the use of material of lower density in exceptional circumstances which will depend upon availability and environmental considerations.

b. Wire
All wire for making the gabions and for tying during the construction of the gabions shall comply with the following requirements:
i. Tensile strength:
350-500 N/mm2 as per BS EN 10223.
ii. Coating:
All the wire shall be heavily zinc coated with a minimum mass of coating in accordance with the provisions of BS EN 10244, see TABLE 2602/2
iii. Elongation:
Elongation shall be not less than 10 % as per BS EN 10223-3.

2604 CONSTRUCTING GABIONS

The gabions should be constructed in accordance to **Clause 2604.**

SERIES 3000 EARTHWORKS

SECTION 3100 CLEARING, GRUBBING AND REMOVAL OF TOPSOIL

3101 SITE CLEARANCE

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

3102 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.

3103 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

When instructed by the Engineer, the Contractor shall demolish wholly or in part, remove and dispose of all buildings, foundations, structures, fences and any other obstructions -which have not been designated to remain.

SECTION 3200 REMOVAL OF EXISTING STRUCTURES

3202 GENERAL

The Contractor shall remove and dispose of all buildings, foundations, bridges, drainage structures and other obstructions within the limits of the Works, except Items designated to remain and utilities and obstructions to be removed as stipulated in SECTION 3100 or under other provisions of this Contract.

3204 REMOVAL OF BRIDGES, CULVERTS AND OTHER DRAINAGE STRUCTURE

Bridges, culverts, and other drainage structures shall not be removed until satisfactory arrangements have been made to accommodate traffic and the flow of water.

3206 REMOVAL OF UTILITIES

The removal of existing utilities required to permit orderly progress of work will be accomplished by local agencies, unless otherwise provided for in the Special Specifications or shown on the Drawings. Whenever a telephone, pipeline, conduit, sewer, or other utility is encountered and must be removed or relocated, the Contractor shall advise the proper local authority or owner to arrange for its removal/relocation.

SECTION 3400 BORROW PIT, QUARY ACQUISITION AND EXPLOITATION

The sources of natural materials such as fill material for the construction of embankments, and gravel for sub-base, base, surfacing and shoulders shall be designated as borrow pits and are defined in CLAUSE 3402.

3403 ACQUISITION OF LAND (PROVISION OF LAND)

The Contractor shall make available free of charge to the Contractor and be responsible for acquisition of all land required for quarries, borrow pits, spoil and stockpile areas and for access thereto in accordance with CLAUSE 1214 of this Specification.

3502 GENERAL

All earthworks shall be constructed as shown on the Drawings or as directed by the Engineer to the specified slopes, levels, depths, widths, tolerances and heights.

3503 CLASSIFICATION OF MATERIAL

There shall be two classifications of material, that is "hard material" and "soft material" which shall be defined as follows:-

a. Hard material

Hard material shall be defined as material whose average unconfined compressive strength determined from a sample of six cores, exceeds 10 MPa.

b. Soft Material

Soft material shall be all materials other than hard material. Soft material shall include waterlogged and swampy material except within swamps covered by CLAUSE 3506 of this Specification

3504 PREPARATION PRIOR TO FORMING EMBANKMENTS

The Contractor shall excavate benches in natural ground having a side slope greater than 1 in 5 or as instructed by the Engineer. The existing slopes, after the removal of topsoil shall be benched in accordance with the Drawings prior to the construction of embankments. The material which is excavated to form benches shall either be taken to spoil or if suitable used as fill. The actual bench widths will be shown on the Drawings or Instructed by the Engineer.

The existing ground under embankments, and bench surfaces where appropriate, shall be compacted over the full width of construction to 95 % MDD (AASHTO T99) to a depth of 150 mm. The existing ground moisture content shall be adjusted prior to compaction by either uniformly mixing in water or drying out the material such that at the time of compaction the moisture content shall be within the range 75 - 105 % of the Optimum Moisture Content (AASHTO T99).

Whenever the existing ground is unsuitable in quality for receiving fill, the Contractor shall excavate to the depth instructed by the Engineer, remove the material to a spoil area and replace it with suitable material.

3505 CONSTRUCTION OF LOWER EMBANKMENTS

Material obtained from cuttings shall be used to construct embankments. Material from borrow pits shall be used only where the Contractor has demonstrated and the Engineer agreed that there is an inadequate quantity of suitable material obtainable from cuttings. The Contractor may, to suit their method of working, take suitable fill material obtained from cuttings to spoil provided they substitute an equivalent quantity of suitable fill material from a borrow pit or other source. The Contractor shall be solely responsible for the acquisition of land for the spoil and borrow areas required in these circumstances and any additional costs due to the substitution over and above the cost of taking the material from cuttings or benches to fill shall be at the Contractor's expense.

All fill materials shall comply to with the specifications set out **in TABLE 3505/1** and detailed in **TABLES 3505/2 to 3505/7.**

Soft material in the upper 300 mm below formation level in both embankments and cuttings shall not contain particles larger than 25 mm. In addition the material shall have a CBR of not less than 10 % measured after a 4-day soak on a laboratory mix compacted to a dry density of 100 % MDD (AASHTO T99), a swell of less than 1 % and a Plasticity Index of less than 50 %. In situ material in the 300 mm below formation level in cutting that does not meet these requirements shall either be spoiled or if suitable placed in the embankment and replaced with material from cuttings or borrow pits that does meet the requirements for soft material for use in the 300 mm below formation level.

The in-situ compaction requirements shall be as follows:

i. All fill material in embankments, except the 300 mm below formation: 100 % MDD (AASHTO T99)
ii. The 300 mm below formation in embankments: 95 % MDD (AASHTO T180)
iii. The 300 mm below formation in cuttings under the carriageway and shoulders: 95 % MDD (AASHTO T180)

3508 CONSTRUCTION OF PAVEMENT FOUNDATION

The pavement foundation shall comprise natural improved subgrade materials, lime and cement treated materials, and bitumen stabilised materials. These shall be constructed in accordance with CLAUSE 3511. The maximum compacted thickness processed and compacted at one time shall be 150 mm.

3509 NATURAL IMPROVED SUBGRADE MATERIALS

The moisture content of all capping materials shall be adjusted immediately prior to compaction by either uniformly mixing in water or drying out the material such that the moisture content during compaction is between 75 % and 105 % of the Optimum Moisture Content (AASHTO T180). The moisture content shall be kept within these limits until compaction is complete except where otherwise instructed by the Engineer.
Each layer of material shall be compacted at a moisture content within the above limits to a dry density equal to at least 95 % of the Maximum Dry Density (MDD) determined in accordance with AASHTO T180.
The maximum compacted thickness processed and compacted at one time shall be 150 mm.

3511 COMPACTION OF LOWER AND UPPER SUBGRADE

The moisture content of fill material, except the 300 mm below formation, shall be adjusted immediately prior to compaction by either uniformly mixing in water or drying out the material such that the moisture content during compaction is between 75 % and 105 % of the Optimum Moisture Content (AASHTO T99). The 300 mm below formation in both embankments and cuttings shall be adjusted by either uniformly mixing in water or drying out the material such that the moisture content during compaction is between 75 % and 100 % of the Optimum Moisture Content (AASHTO T180). The moisture content shall be kept within these limits until compaction is complete except where otherwise instructed by the Engineer.
Each layer of material shall be compacted at a moisture content within the above limits to a dry density equal to at least the percentage of the Maximum Dry Density (MDD) specified below:-
i. All fill material in embankments, except the 300 mm below formation: 100 % MDD (AASHTO T99)
ii. The 300 mm below formation in embankments: 95 % MDD (AASHTO T180)
iii. The 300 mm below formation in cuttings under the carriageway and shoulders: 95 % MDD (AASHTO T180).

3512 SPOIL MATERIAL

Spoil material shall be deposited in spoil areas located by the Contractor subject to the approval of the Engineer and the Contractor shall give the Engineer at least 24 hour notice of intention to commence spoiling operations at a particular location.

3513 BORROW PITS

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.

3514 PROOFROLLING

All subgrade and, embankment layers, cuttings, benches-and original ground shall be proof rolled with a loaded scraper or truck with a minimum axle load of 8 tonnes. Proof

rolling shall be satisfactorily completed before the layer is submitted to the Engineer for approval and shall be carried out in the presence of the Engineer. All such proof rolling shall be at the Contractor's expense

3517 SIDE DRAINS

Side drains are considered as cuttings in accordance with **CLAUSE 3501** of this section of this Specification and the excavation thereof is classified as earthworks

3518 MEASUREMENT AND PAYMENT

Earthwork fill shall be measured by the cubic metre of compacted material measured in the completed embankment. No separate measurement or payment shall be made for excavating material to form embankments.

SERIES 4000 NATURAL, CRUSHED STONE AND STABILISED PAVEMENT LAYERS

SECTION 4100 GRAVEL WEARING COURSE

4101 GENERAL

A "gravel wearing course" means a top surfacing course constructed from one or a combination of these materials and may be a course placed on the formation of a new road where no pavement and final bituminous surface is included in the Contract, or placed on the formation of a service road, deviation or access road

4102 CLASSIFICATION OF MATERIAL

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

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

4103 MATERIAL REQUIREMENTS

Gravel material shall conform to the requirements given below:

TABLE 4103/1: REQUIREMENTS FOR LAYERS OF GRAVEL WEARING COURSE G20 MATERIAL

Property Specification			Property Specification		
Natural gravel or mixtures of natural gravels, volcanic gravel (scoria), and sand or up to 30 % of natural stone, crushed stone, scarified pavement material or milled bituminous pavement material conforming to the following requirement:					
Bearing Strength & Plasticity Properties			Grading After Compaction for Gravel Wearing Course		
CBR at 95 % MDD (AASHTO T180) and 4 days soak (%)	Min 20		Sieve (mm)	% by weight passing	
				Class 1	Class 2
Swell (%)	Max. 1.0		37.5	-	100
Plasticity Index (%)	Wet areas	5 – 20	28	100	95-100
	Dry areas	5 – 25	20	95-100	85-100
Plasticity modulus	200 – 1,200		14	80-100	65-100
Plasticity	280 – 480		10	65-	55-

Product			100	100
Grading modulus	1.0 – 1.9	5	45-85	35-92
		2	30-68	23-77
		1	25-56	18-62
		0.425	18-44	14-50
		0.075	12-32	10-10

4104 ORDER OF WORK

The Contractor shall commence laying wearing course starting as close as possible to the source and shall work away from it so that the maximum amount of compaction is given to the wearing course by the Contractor's vehicles. The Contractor shall route their vehicles to give even wear and compaction over the whole width of the wearing course.

4105 PREPARATION OF FORMATION

The formation shall be cleaned of all foreign matter, and any potholes, loose material, ruts, corrugations, depressions and other defects which" have appeared due to improper drainage, traffic or any other cause shall be corrected

4106 SETTING OUT

The gravel wearing course shall be set out in accordance with SECTION 1800 of this Specification.

4107 LAYING AND COMPACTING GRAVEL WEARING COURSE

The compacted thickness of any layer laid, processed and compacted at one time shall not exceed 225 mm and where a greater compacted thickness is required, the material shall be laid and processed in two or more layers. The minimum layer thickness shall be 100 mm.
Following the final trim, the material shall be compacted to a dry density of at least 95 % MDD of AASHTO T180. During the grading, trimming and compaction of the material the Contractor shall ensure that the surface and/or the material does not dry out by applying fog sprays of water or other approved means sufficient to maintain the surface and/or material within the specified limits of moisture content.

4108 PROOFROLLING

The Contractor shall proofroll the completed layers in accordance with CLAUSE 4205 of this Specification.

4109 TOLERANCES

The gravel wearing course shall be constructed to the tolerances specified in SECTION 1800 of this Specification.

4110 MAINTENANCE

The wearing surface shall be maintained by the Contractor in its finished condition and shall be watered, graded, dragged, reshaped, or recompacted as necessary, until the Certificate of Completion is issued, or until the Engineer instructs that the road shall be opened to public traffic, whichever is the sooner.

SECTION 4200 NATURAL GRANULAR MATERIAL PAVEMENT.

4201 GENERAL

The term "natural material- includes lateritic gravel, quartzitic gravel, calcareous gravel, soft stone, coral rag, conglomerate, sand or clayey sand or a combination of any of these materials. A natural material is also referred to as “gravel".

4203 MATERIAL REQUIREMENTS

Materials for natural base and sub-base as specified on the Drawings shall meet the requirements given in **TABLE 4203/1** to **TABLE 4203/4** of standard specification.

4204 LAYING AND COMPACTING

The compacted thickness of any layer laid, processed and compacted at one time shall not exceed 225 mm and where "a greater compacted thickness is required, the material shall be laid and processed in two or more layers.
The minimum layer thickness shall be 100 mm. The material shall be broken down to the grading specified in **CLAUSE 4203**. Any oversize material which cannot be broken down to the required size shall be removed and disposed of
The moisture content during compaction is between 80 % and 105 % of the Optimum Moisture Content (AASHTO T180)
Following the final trim the material shall be compacted to a dry density of at least 95 % MDD of AASHTO T180.

4208 TREATED MATERIALS

Lime or cement treatment, if required by the Special Specification or Drawings, shall be carried out in accordance with **SECTION 4400** of this Specification

SECTION 4400 HYDRAULICALLY IMPROVED & BOUND TREATED MATERIALS

4401 SCOPE

Following the addition and mixing in of the stabiliser the material is referred to as "improved, modified, or bound" depending on the behaviour of the material after mixing and compacting. The nomenclature of the materials in **CLAUSE 4501** reflects this.

4402 SOURCES OF MATERIAL

a. Natural Materials
In accordance with **SECTIONS 3600, 4200 and 4300** of this Specification.

b. Cement and Lime
i. Cement
Unless otherwise specified cement shall be ordinary Portland cement complying with the requirements of KS EAS 18-1, or equivalent standard as approved by the Engineer.
ii. Lime
Lime shall be hydrated calcium lime or quicklime and shall comply with the requirements of KS 1755, or equivalent standard as approved by the Engineer.
iii. Storage and handling
The requirements of CLAUSE 7403 of this Specification shall apply to cement.
All lime shall be kept under cover and protected from moisture. Consignments shall be used in the same sequence as they are delivered. Stocks which become damaged or which are stored on the Site for more than 3 months shall not be used, and shall be replaced at the Contractor's expense. Operators and labour shall be provided with protective clothing, masks and goggles.

4404 AMOUNT OF STABILIZER TO BE ADDED

The amount of cement or lime to be added shall be determined by the Engineer following laboratory trials, and site trials carried out by the Contractor in accordance with CLAUSE 1732 of this Specification.

4403 MIX-IN-PLACE METHOD OF CONSTRUCTION

The mix-in-place method may be used for the addition and mixing in of stabiliser.

a. Mixing Equipment

The equipment for pulverising the material and mixing in the stabiliser shall be purpose - built equipment, capable of pulverising the materials and mixing in the stabiliser to the full depth of the loose layer necessary to give the specified thickness of compacted material mixed and compacted in accordance with this section of this Specification.
The mixers shall be equipped with a device for controlling the depth of processing and mixing blades shall be maintained or reset periodically so that the correct depth of mixing is obtained at all times. Mixing by grader will not be permitted.

b. Preparation of the Layer

Before the stabiliser is applied, the material to be treated shall be spread and broken down and oversize material removed so that the maximum size of the particles is not more than specified. If multi-pass processing is employed, the material shall first be pulverised to the required tilth by successive passes. The material shall then be shaped true to line, grade and cross-section and, if required, lightly compacted.
The moisture content of the layer before the addition of the stabiliser shall be adjusted to within the range of 70 % to 85 % of the" Optimum Moisture Content (AASHTO TI80).

c. Spreading the Stabiliser

After the layer to be treated has been* prepared to the satisfaction to the Engineer, the stabiliser shall be uniformly spread over the width to be worked at the specified rate. If a spreader is used to spread the stabiliser ahead of the mixer, it shall be fitted with a device to ensure a uniform and controllable rate of spread both transversely and longitudinally.

d. Mixing and Watering

Immediately after the stabiliser has been spread, it shall be thoroughly and intimately mixed into the material for the full depth, of the layer. Mixing shall continue until the resulting mixture forms a fine and homogeneous tilth. The mixing machine shall be set so that it cuts at least 100 mm into the edge of any adjoining lane processed previously so as to ensure that all the material forming the layer has been properly processed.

4407 COMPACTION AND FINISHING

For cement treated materials final compaction and finishing shall be completed within 2 hours after the cement comes into contact with the material to be treated. For lime treated materials, final compaction and finishing shall be completed within 4 hours after the lime comes into contact with the material to be treated.

4408 JOINTS BETWEEN NEW AND EXISTING WORK

The forming of construction joints and the protection of previously treated or other work shall be carried out so as to produce a uniformly compacted and homogeneous layer free from ridges or other irregularities.
Full width working, without longitudinal joints, will generally be required. Half-width working may be instructed by the Engineer to pass traffic. When forming longitudinal joints, with the mix-in-place, method, at least 100 mm of the first laid half-width layer shall be retreated and mixed in with the second laid half-width layer.

4409 PROTECTION AND CURING

Treated layers shall be kept continuously damp by lightly spraying with water, from completion of compaction until one of the curing systems specified below is placed. Treated layers shall be protected, within 4 hours of completion of compaction in the case of cement treated material and 8 hours in the case of lime treated material.

The curing system shall be kept in place and intact for a minimum of 7 days after completion of compaction although small areas may be temporarily removed for the purposes of carrying out control testing but only for the minimum amount of time required for the testing.

4410 TRAFFIC

Traffic or equipment, other than that actually engaged in the various treatment or protection processes, shall not run over the layer being processed or compacted.
On completion of curing no traffic or equipment shall be allowed on the treated layer with the exception of that required for proofrolling, priming or construction of the subsequent layer.

4411 TOLERANCES

All tolerances shall be adhered to in accordance to **Clause 4411**.

SERIES 5000 BITUMINOUS SURFACE TREATMENTS, SEALS AND PAVEMENT LAYERS

SECTION 5100 GENERAL REQUIREMENTS FOR BITUMINOUS MATERIALS

5102 BITUMINOUS BINDER SPECIFICATIONS

a. General
The various bituminous binders specified shall comply with the relevant specifications as stated in TABLE 5102/1 or equivalent standards according to the Special Specifications and on the approval of the Engineer:

5103 BITUMINOUS BINDER STORAGE AND HANDLING

When carried in bulk containers, records of binder temperature and time in a manner acceptable to the Engineer shall be kept. Any bituminous binder not conforming to the requirements of **CLAUSE 5104** may be rejected by the Engineer as unsuitable for use in the Works.
The bitumen storage area and heating station shall be kept neat and tidy. The storage area shall be cleared of vegetation and the drums stacked on their sides and only in small quantities with gaps between each stack to reduce fire risk.

5104 HEATING OF BITUMINOUS BINDER

During storage the temperature of the bituminous binder shall be kept as low as possible, consistent with reasonable pumpabllity.
The bituminous binder shall be heated in boilers or bulk storage containers, equipped with adequate pumps and accurate thermometers. No bitumen shall be heated in a boiler when the thermometer is broken or inaccurate.
The minimum pumping temperatures, the range of spraying temperatures and the maximum heating temperatures of cut-backs, penetration grade bitumens and emulsions are given in **TABLE 5104/1** in the standard specifications.

5107 PROTECTION OF KERBS, CHANNELS ROAD FURNITURE, ETC

Kerbs, channels, manholes, guard rails, bridge railings and any other structures, adjoining seals to be constructed, shall be protected from soiling. The Contractor shall replace at their own cost any Items that have been soiled.

5108 SAFETY PRECAUTIONS

The Contractor shall take every precaution to avoid fire or health hazards. He shall always ensure that:
1. Bitumen is heated only to the temperature required for the particular application;
2. Hot bitumen never comes in contact with water;

3. Suitable protective clothing and gloves are used when handling hot bitumen; and
4. Dust is reduced to a minimum.

Great care is required when using rapid-curing cut-back, because of the highly flammable nature of the solvent

SECTION 5200 PRIME COAT & TACK COAT

5203 PREPARATION OF SURFACE

The surface to be sprayed shall be thoroughly cleaned by sweeping with mechanical brooms and/or washing or other approved means. All laitance of soil or binder material, loose and foreign material shall be removed

In order to bring the surface to be primed to the condition required, water shall-be applied in small Increments by a distributor. Any water on the surface after spraying shall be allowed to drain away before the prime coat is applied.

5204 SPRAYING OF PRIME COAT AND TACK COAT

As soon as possible after the surface to be sprayed has been prepared as specified in CLAUSE 5103 and approved by the Engineer, the prime or tack coat shall be sprayed on to it at the specified rate. Spraying shall be carried out not later than 12 hours after the surface has been prepared

The nozzles shall be arranged to give a uniform spray and shall be tested prior to spraying by discharging on to suitable material (such as building paper, metal sheets, etc…) or into purpose made troughs. Testing shall not take place on the road, and any bitumen spilt on the ground shall be cleaned off.

During spraying all kerbs, road furniture, culvert headwalls, tree boles and the like which are liable to be disfigured by splashing of bitumen shall be protected, and any such feature which is accidentally marred by bitumen shall be cleaned off with a suitable solvent or made good.

5205 CURING AND BLINDING OF PRIME COAT

If, after the application of the prime coat, the bituminous material fails to penetrate within the time specified or if the road must be used by traffic, blinding material shall be spread in the amount required to absorb any excess bituminous material and to protect the primed surfaced.

Blinding material shall be spread from trucks in such a manner that no wheel will travel on uncovered bituminous material.

5206 TOLERANCES

The rate of application of bituminous binder across the width of each spray run shall not vary by more than +/- 10 % of the rate ordered and the average rate of binder for each single run of the spray truck shall be at least equal to the rate ordered. Tray tests should be taken at least once a day during priming operation to check calculations based on dipping of spray trucks.

SECTION 5700 BITUMINOUS BASE COURSE AND ASPHALT CONCRETE SURFACING

This Section covers all the work in connection with the construction of bituminous base courses and asphalt concrete surfacing for new roads, pavement rehabilitation or maintenance.

5702 MATERIALS

a. General

The coarse and fine aggregate shall be produced by crushing of rock obtained by blasting of hard solid rock formation. The crushing shall be by multi-stage equipment in order to produce aggregates of angular shape. The aggregates shall be clean and free from decomposed materials, vegetable matter and other deleterious substances.

b. Bituminous Binders
The various bituminous binders specified shall comply with the relevant specifications as stated in SECTION 5100 or equivalent standards according to the Special Specifications and on the approval of the Engineer.

c. Aggregates
The aggregates employed for all the asphaltic pavement layers when tested shall conform to the requirements unless otherwise stated in the individual clauses.

d. Materials Specifications for Asphalt Mixes.
The materials specifications for asphalt surfacing mixes including grading of the combined aggregate and any filler added in an approved working mix shall be within the limits stated in TABLES 5702/1 - 5702/7 of the standard specification for the respective mixes.

f. Requirements for Hot Mixed Dense Bituminous Macadam (DBM) for Base Course
The materials specifications for dense bituminous macadam (DBM) for base course mixes including any filler added in an approved working mix shall be within the limits stated in TABLES 5702/8. g. Aggregates and Mix Design Requirements For Bitumen Stabilised Materials (BSM) i. General The aggregate shall be natural gravel, crushed material or approved material milled off existing pavement layers. Unless otherwise approved by the Engineer the material shall be placed in stockpile prior to mixing with bitumen.

g. Aggregates and Mix Design Requirements For Bitumen Stabilised Materials (BSM)

i. General
The aggregate shall be natural gravel, crushed material or approved material milled off existing pavement layers. Unless otherwise approved by the Engineer the material shall be placed in stockpile prior to mixing with bitumen.

ii. Aggregate strength
The TFV of the coarse aggregate used in cold mixed bituminous base course, when determined dry in accordance with BS EN 1097-2 or equivalent, shall not be less than:
• 110 kN for Traffic Load greater than 1 x 106 M CESA
• 80 kN for Traffic Load less than 1 x 106 M CESA
The appropriate Traffic Load Class shall be as given in the drawings or Special Specifications. Where such information is not given, the decision of the Engineer shall apply. The wet strength shall not be less than 75 % of the dry strength.

iii. Properties of mixed material
The grading of the combined aggregate including any filler added in an approved working mix shall be within the limits stated in SUBCLAUSE 4202 (C) for the respective mixes. The approved grading shall be designated as the target grading. The mean grading of each lot of the working mix (minimum of 6 tests per lot) determined from samples obtained in a stratified random sampling procedure, shall conform to the approved target grading within the tolerances specified in SUBCLAUSE 5713(b).
For materials specifications see tables in SUBCLAUSE 4202 (C).

i. Asphalt Reinforcing
Asphalt reinforcing shall be of the type specified in the Special Specifications and shall be obtained from an approved manufacturer.

j. Recycling
The Engineer will test the existing asphalt in any part of the road and determine its suitability for recycling before removal. He may instruct the Contractor to drill additional cores at specified points. Recovered asphalt intended for recycling shall be stored separately from other asphalt, and the Engineer may also direct different types of asphalt to be stored separately.

5703 MIX DESIGN AND PROPERTIES OF MIXED MATERIALS

The Asphaltic mix design shall be carried out in accordance with the current edition (28 days prior to tendering) of one of the following standards:
1. Marshall Mix Design: Asphalt Institute Manual Series, MS-2;
2. SuperpaveTM Mix Design: Asphalt Institute Manual Series, SP-2.

In general, the Marshall Mix Design method shall be employed unless the SuperpaveTM method is particularly specified.

5704 COMPOSITION OF MIXTURES FOR BITUMINOUS BASE COURSE AND SURFACING

The rates and proportions actually used shall be determined to suit the materials used and conditions prevailing during construction and any approved variation on a nominal mix in the bitumen content or active filler content shall be the subject of an adjustment in payment for binder or active filler variations as described in CLAUSE 5715.

Before production or delivery of the bituminous material the Contractor shall submit samples of the materials they propose to use in the mix, together with the proposed mix design as determined by an approved laboratory, to the Engineer in accordance with CLAUSE 1708, so that the Engineer may test the materials and confirm the use of the proposed mix if they are satisfied that it meets the specified requirements.

A mix design shall be submitted for the approval of the Engineer for each new material source the Contractor proposes to use or when significant changes in the material properties are encountered within a material source or as deemed necessary by the Engineer. Any proposed change of mix design for use in Permanent Works shall be notified to the Engineer for their approval minimum 7 days in advance of proposed use.

The working mix shall again be tested by the Contractor for compliance with the design requirements. Samples of the working mix shall also be made available to the Engineer, who will authorize the use of the working mix proportions finally approved for use.

The composition of the approved working mix shall be maintained within the tolerances given in TABLES 5713/1, 5713/2, and 5713/3.

5705 CONSTRUCTION EQUIPMENT

a. General

The Contractor shall submit to the Engineer full details of the Construction Equipment they propose to use and the procedures the Contractor proposes to adopt for carrying out the Permanent Works. The Engineer shall have access at all times to construction equipment for the purpose of inspection.

All equipment shall be designed and operated to produce a mixture complying with the requirements of this specification. The construction equipment used in the mixing, transportation, laying, and compaction of bituminous materials shall be of adequate rated capacity, in good working order and subject to approval by the Engineer. Obsolete and worn-out equipment will not be allowed onsite.

b. Mixing Equipment

i. General

Mixing of the bituminous mixture shall be carried out in appropriate equipment acceptable to the Engineer.

ii. Stationery or portable mixing equipment

Bituminous mixture shall be mixed by means of an approved type mixer of proven suitability for producing a mixture complying with all the requirements of the Specifications.

The mixing equipment may be either automatically or manually controlled. Two control operators shall be provided.

iii. Recycling

In addition to the requirements set out in CLAUSE 5705 the mixing equipment shall be specially adapted to deal with recycling and any such adjustments shall be in accordance with the instructions of the manufacturer of the mixing equipment on the approval of the Engineer.

c. Spreading Equipment, Pavers

The bituminous material shall be laid by an appropriate type of self-propelled mechanical spreader of a type approved by the Engineer and shall be kept in a good running condition and adjusted correctly according to the manufacturer's specifications.
The pavers shall be equipped with a powerful tamper and vibrating screed. The pavers shall be capable of laying the material to widths, lines, grades cross-fall and thickness within the specified tolerances without causing separation, dragging or other surface defects.
All pavers used for laying Permanent Works shall be fitted with automatic electronic screed controls to maintain the required levels, cambers and cross-falls. Where skids are used they shall be at least 9 m long or as specified by the Engineer.

d. Compaction Equipment
Compaction shall be done by means of approved flat steel wheeled, vibratory or pneumatic-tyred rollers, sufficient in size and numbers to achieve the specified density through the entire depth of the layer. Minimum one roller shall be pneumatic tyred with a weight of minimum 2.5 tonnes per wheel and not less than 18 tons total un-ballasted weight.

e. Binder Distributors
Where bituminous binders are to be sprayed onto areas before laying the asphalt is done, the binder distributors shall comply with CLAUSE 5103.

f. Vehicles
All vehicles used for transporting asphalt shall be insulated. Delivery trucks should be fitted with rear spill trays to facilitate transfer of material to paver without spillage.
All vehicles used for transporting asphalt shall be fitted with canvas for transport in excess of 10 km or when weather conditions demand such cover in the opinion of the Engineer. Such covers shall be securely fixed over the asphalt from time of departure at the storage or mixing equipment until immediately prior to discharge of the asphalt into the paver.

g. Construction Equipment For Recycled Asphalt
Construction equipment for producing, hauling and placing the recycled asphalt shall comply with the provisions of SUBCLAUSES 5705(a) to 5705(f), as applicable.

5707 PRODUCING AND TRANSPORTING THE MIXTURE

a. Mixing and Storage Temperatures of Binder
Bituminous binders shall be stored at temperatures not exceeding those given in TABLE 5707/1 or the Special Specifications, or as stated by the supplier, and the aggregate and bituminous binders shall be heated at the mixing equipment to such temperatures that the mixed product shall have a temperature within the range given in TABLE 5707/1. The manufacturers storage and mixing temperatures shall take precedent.

b. Production of the Mixture

i. Hot mixes using batch equipment
1. Heating the aggregate The aggregate shall be dried and heated so that, when delivered to the mixer, its temperature shall be between 0°C and 20°C lower than the maximum temperature indicated in TABLE 5707/1 for the mixture. The moisture content of the mix shall not exceed 0.5 %. 2. Batching
Each fraction of the aggregate and binder shall be measured separately and accurately in the proportions by mass in which they are to be mixed. If filler is used, it shall be measured separately on a scale of suitable capacity and sensitivity. The error in the weighing apparatus used shall not exceed 2 % for each batch.
3. Mixing
The aggregate, filler and binder shall be mixed until a homogeneous mixture is obtained in which all particles are uniformly coated. Care shall be taken to avoid excessively long mixing times which can cause hardening of the binder.

ii. Hot mixes using drum-type mixer equipment
The aggregate and filler shall be accurately proportioned and conveyed into the drum-

mixing unit. The calibrated amount of binder shall be sprayed onto the aggregates at the correct position so that no hardening of the binder shall take place. A homogeneous mixture and uniform coating of binder must be achieved and the moisture content of the asphalt mixture shall not exceed 0.5 %. Once the final mix temperature has been agreed upon it may not be altered without the prior consent of the Engineer.

iii. Cold mixes using stationary, portable or in-situ mixing equipment
Mixing of bituminous base for use in Permanent Works shall only be carried out in mixing equipment approved by the Engineer and on the basis of an approved mix design. Any proposed change of mix design for use in Permanent Works shall be notified to the Engineer for approval minimum 7 days in advance of proposed use.

c. Transporting the Mixture
The mixture shall be transported from the mixing equipment to the Works in trucks complying with the requirements of CLAUSE 5705. Deliveries shall be made so that spreading and rolling of all the mixtures prepared for a day's run can be completed during daylight, unless artificial lighting, as approved by the Engineer, is provided. Any asphalt which has become unusable in the opinion of the Engineer due to rain or any other cause will be rejected. Hauling over freshly laid material is not permitted.

d. Recycled Asphalt
The provisions of SUBCLAUSES 5707(a) to 5707(c) shall apply with changes as required. At least four weeks before paving with recycled material commences, the Contractor shall submit to the Engineer full particulars regarding the recycling methods they intends to use.

5708 SPREADING THE MIXTURE

a. General
i. The paver, general
The paver shall be kept in good working order, and adjustment of the screed tamping bars, feed screws, hopper feed, etc, shall be checked frequently to ensure uniform spreading of the mix.
If segregation or other imperfections occur, the spreading operations shall immediately be suspended until the cause is determined and corrected.
The mixer capacity and the operating speed of the paver are to be so co-ordinated as to ensure continuous laying and to avoid intermittent stopping of the paver.

ii. Workmanship
The bituminous layer shall be laid and compacted in one or more layers giving a total thickness as specified.
The addition and removal of material behind the paver shall normally not be allowed and the paver shall be capable of spreading the mixture to the correct amounts that will provide the required compacted thickness and surface evenness without resorting to spotting, picking-up or otherwise shifting or disturbing the mixture.

iii. Base course thickness paved in one operation
Base course with a compacted thickness greater than 100 mm may only be placed to its full thickness in one layer if site trials show that satisfactory finish, evenness and compaction of the full thickness can be achieved and the result is to the satisfaction of the Engineer.

iv. Base course thickness, first layer
No bituminous base course material shall be placed as the first layer of the base course in a compacted thickness less than 60 mm or less than three times the aggregate's maximum particle size, whichever is smaller.

v. Base course thickness, following layers
Following layers to be placed on freshly laid bituminous base course layers may be placed in a compacted thickness less than the above subject to satisfactory results of site trials and on approval of the Engineer, but not less than twice the maximum aggregate size for materials.

vi. Weather
Paving shall stop when rain is imminent and compaction of all laid material shall be completed immediately.

vii. Hot mixes, special requirements
The temperature of hot mixtures shall be controlled by measuring in a random pattern in the truck immediately before emptying, and shall not be more than 10°C below the minimum temperature specified for mixing in TABLE 5707/1.

viii. Cold mixes: special requirements
No cold mixed bituminous base course material shall be laid unless the moisture content is within the specified limits. Should the moisture content of stockpiled materials fall outside these limits, the Contractor may propose methods to bring the moisture content back to comply with the requirements.

b. Overlays
In the case of overlays, guide wires will be required during the placing of the mix if specified in the Special Specifications. In all cases, including levelling courses, the paver shall be provided with skid beams with electronically controlled equipment which can ensure a constant crossfall and can even out local irregularities.

c. Restricted Areas
Bituminous material shall be placed in restricted areas with the aid of smaller specially equipped pavers, hand tools, or other approved equipment. The space concerned shall be properly filled with asphalt, without leaving any gaps between the fresh asphalt and existing pavement layers.
All the relevant provisions in regard to temperature, mix composition, uniformity, etc, shall remain applicable, but layer thickness and control shall be such that the requirements for compaction and surface tolerances can still be attained where bituminous material is laid in restricted area.

d. Recycled Asphalt
The provisions of SUBCLAUSES 5708(a) to 5708(c) shall apply unless otherwise stated below.

5709 JOINTS

All joints between adjacent sections of the work shall be made by cutting back the layer against which the material is to be placed unless otherwise approved by the Engineer. All loose and incompletely compacted material shall be removed. A cutting wheel shall be used for cutting longitudinal joints.
Joints shall be either at right angles or parallel to the centre line, and joints in the final layer of the surfacing shall, where possible, correspond with the lane markings. Joints in lower layers shall be offset not less than 150 mm on either side of the edges of the traffic lanes.

5710 COMPACTION

The mix shall be rolled immediately after it has been laid by vibratory, steel wheel and pneumatic tyred rollers in a sequence predetermined and approved during the laying of trial sections. Such rolling shall commence and be continued only for so long as it is effective and does not have any detrimental effect.
The minimum temperature of the mixture at the commencement of compaction shall be 125 °C when 80/100 or 180/200 pen bitumen is used. The minimum temperature at completion of compaction shall be 80 °C when 80/100 or 180/200 pen bitumen is used. Typical compaction temperatures are usually in the ranger of 135-155 °C for both unmodified and modified binders. The temperature specified by the manufacturer shall take precedent. In the absence of manufacturer data, the compaction temperature shall correspond to the range of viscosity of 2 to 20 Pa.s.
No movement of the asphalt layer shall occur under steel wheel rollers once the asphalt temperature has dropped to below 100°C. Three-wheeled steel rollers, with large diameter rear wheels are preferable to tandem rollers and may be used in conjunction

with pneumatic tyred rollers, provided pick-up of the asphalt on the wheels does not occur.

5711 LAYING TRIAL SECTIONS

A trial section of minimum 100 m length shall be constructed prior to the use of any new mix design, when there are changes in the type or numbers of construction equipment, or as required by the Engineer. The trial section shall demonstrate that the materials, equipment and procedures proposed are adequate to achieve a bituminous layer in accordance with the Specifications and to the satisfaction of the Engineer.
Any bituminous material laid in a trial area that forms part of the Permanent Works and subsequently found unacceptable, shall be removed or made good to comply with the Specifications.
Only when such a trial section has been satisfactorily laid and finished, and complies with the specified requirements will the Contractor be allowed to commence with construction of the permanent work.

5712 PROTECTION AND AFTERCARE

a. General

The Contractor shall protect the bituminous base course and asphalt surfacing from all damage until the work is finally accepted by the Employer and the Contractor shall maintain the surfacing work until the issue of the taking over certificate. Any damage occurring to the completed base or surfacing, excepting fair wear and tear on surfacing during the defect liability period, or any defects which may develop due to faulty workmanship, shall be made good by the Contractor at their own expense and to the satisfaction of the Engineer.
Bituminous base courses shall be covered with the surfacing within 7 days of laying. Prior to construction of the surfacing, the base must have been dry (free of rain) for at least 48 hours.
Traffic can under normal conditions be allowed on to the fresh layer immediately after compaction is completed unless otherwise directed by the Engineer.

b. Special Requirements For Cold Mixed Base Course Material

Traffic can under normal dry conditions be allowed on the fresh layer immediately after the compaction is completed unless otherwise directed by the Engineer.
Where the base course is placed in more than one layer, no more than 7 days shall elapse between completion of consecutive layers. No more than 14 days shall elapse from completion of the base course until the surface dressing is constructed
Approved crusher dust or clean sand shall at no additional costs to the Employer be evenly spread at a rate of 0.005 m3/m2 immediately following the spraying of tack coat.

5713 CONSTRUCTION TOLERANCES AND FINISH REQUIREMENTS

a. Construction Tolerances

Construction tolerances and finish shall meet all relevant requirements in **SECTION 1900**. The riding quality of the final layer shall be to the satisfaction of the Engineer.

b. Grading

The combined aggregate and filler grading shall not deviate from the approved target grading for the working mix by more than that given in **TABLES 5713/1 and 5713/2** respectively for Asphalt Concrete surfacing and bituminous base course materials in the standard specification.

c. Binder Content

i. Hot mixed material

The binder content shall be controlled to comply with the limits given in CLAUSE 1800.

ii. Cold mixed material

The maximum accepted deviation in bitumen content of cold mixed bituminous base

course material compared to that of the approved Mix Design is given in TABLE 5713/3 or according to the Special Specifications.

5714 SAMPLING AND TESTING.

All sampling and testing shall be carried out in accordance with sampling and testing standards laid down in the Specifications, or equivalent approved by the Engineer.

SECTION 5800 SURFACING OF BRIDGE DECKS

5801 SCOPE

This section covers the construction of a bituminous surfacing on bridge decks where shown on the Drawings or ordered by the Engineer.

5802 MATERIALS

Bituminous binders and aggregate shall comply with the requirements of SECTIONS 5200 and 5300 for asphalt surfacing and seals respectively.

5803 PREPARATION ON SURFACE

Before the surfacing is constructed, the concrete deck shall be thoroughly cleaned by washing and brushing to remove all loose material. After drying, a tack coat consisting of bituminous cationic emulsion shall be applied to the surface at a rate of 0.4 1/m2 residual bitumen. The tack coat shall then be allowed to dry.

5804 TYPE AND THICKNESS OF SURFACING.

Before commencing with the construction of the surfacing, the actual levels of the bridge deck shall be determined by means of accurate levelling. The levels and grades to which the surfacing is to be constructed shall be as shown on the Drawings or as indicated by the Engineer.

5805 CONSTRUCTION

Irrespective of the type of seal applications on the road on both sides of the bridge, asphalt surfacing shall be constructed in accordance with **SECTION 5200**, and seals in accordance with **SECTION 5300.**

5806 SURFACE TOLERANCES

The completed surfacing shall comply with the requirements for base of **SECTION 1900** in respect of surface tolerances for grade, smoothness, cross-section and width.

SECTION 5900 TREATMENT OF SURFACE DEFECTS, PATCHING, REPAIRING EDGE-BREAKS AND CRACK SEALING.

5901 SCOPE

Patching involves excavating the existing failed sections and reconstructing the excavated fills and pavement layers with the specified pavement material. Backfilling with asphalt will be measured and paid for under **SECTION 5200.**

5902 MATERIALS

The material shall comply with the requirements specified for the various types of material in the appropriate sections of the Specifications and the Special Specifications.

5903 CONSTRUCTION EQUIPMENT

All equipment shall be suitable for the specified use and working areas and shall be capable of obtaining the specified results

a. Planing Machine

The machine shall be of a design which will be suitable for planing the existing surfacing in order to remove and irregularities and to leave an even surface without tearing the underlying material. An approved milling machine may be used. Before planing may start, the Contractor shall demonstrate to the Engineer that the machine is capable of executing the work in accordance with the Special Specifications.

b. Patching and Repairing Edge Breaks

Only approved cutting or sawing equipment may be used for cutting or sawing asphalt layers. The equipment shall be capable of cutting asphalt layers to depths of 200 mm in one operation without fragmenting the material, and in straight lines within the required tolerances

c. Crack Sealing

Over and above the equipment normally used for surface treatments, the following additional equipment shall be available for crack sealing:

i. Special spraying equipment with 2 mm nozzle openings and provided with spare nozzles.

ii. Special heating equipment where appropriate for cleaning cracks, and custom-built applicators for applying sealants to cracks.

5905 PATCHING

a. Demarcation

The Contractor shall give adequate notice to the Engineer of their intention to commence with repair work on any specific section of the road so that the Engineer will have sufficient time to demarcate the areas to be patched and repaired.

In addition to their specified responsibilities for the accommodation of traffic, the Contractor shall also be responsible for traffic accommodation during the demarcation work.

b. Excavating Pavement Material

In addition to the provisions of this section the various provisions of **SECTIONS 3200, 3300, 3600, 5100 and 5200** amongst others shall apply with changes as required.

c. Excavating Pavement Material

Unless otherwise instructed by the Engineer, the patching shall have a neat rectangular shape. The existing material shall be excavated and removed to the full specified depth. Asphalt layers and surfacing shall be cut with approved sawing equipment.

Excavation for patching shall be cut with side slopes of approximately 90° to the horizontal Where required, excavation shall be done with approved milling equipment in accordance with **SECTION 3600.**

d. Backfilling Excavations

Excavations shall be backfilled with pavement material as specified in the Special Specifications or as ordered by the Engineer, and the backfilling shall be compacted and finished to the required levels.

5906 REPAIRING EDGE BREAKS

This treatment is intended for use where trimming and/or repair of the edges of the surfaced area is required, including restoring the road edges to the true edge lines of the original road or to such other edge line as may be required.

Where the existing edge of the surfacing is sound but exceeds the required width by more than 150 mm, the excess surfacing shall be cut back to the required width keeping it parallel to the centre line of the road.

Where the edges of the surfacing have broken away or where the surfacing is narrower than the required new width, the existing broken edges shall be cut back until a sound edge can be obtained.

5907 CRACK SEALING

a. General

The types of cracks treated will be specified in the Special Specifications as well as RDM

5.1 and RDM 5.2. The Engineer will instruct the Contractor regarding the type of treatment to be used in the various cases.

b. Preparation
The cracks shall be blown clean with compressed air, and all foreign and loose material shall be removed from the cracks.

c. Narrow Cracks (less than 2 mm in width)
They are difficult to seal effectively.
Consider using the following seals:
i. Emulsion slurry seal
ii. A mixture of fluid cutback bitumen and sand
iii. A mixture of rubber latex and bitumen emulsion (1 part to 10 parts)

d. Medium Cracks (2 mm to 5 mm in width) They may be sealed with emulsion slurry or rubber bitumen sealing compound.

e. Large Cracks
These are usually accompanied by distortion and require more extensive treatment (removal and replacement of defective areas or overlay). If there is no displacement or distortion the procedure given below shall be followed.

f. Application
After the primer has been applied, anionic stable grade emulsion shall be mixed with synthetic modifiers, as set out in the Special Specifications, and applied by means of pneumatic spraying equipment or other approved equipment at the rate given in the Special Specifications. Where the cracks are to be rolled, the Contractor, in accordance with the Special Specifications or the prescriptions of the Engineer, shall treat the cracks.

5908 OPENING TO TRAFFIC

The road shall be left open to traffic for such period as the Engineer may direct before further surface treatment work is carried out.

5909 JOINTS AND THE PROTECTION OF KERBS

The requirements of **SUBCLAUSE 5307(b)** regarding joints between sprays and the protection of kerbs, channels, etc, shall be observed.

SERIES 6000 CONCRETE PAVEMENTS AND MODULAR PAVING

SECTION 6200 SEGMENTAL BLOCK PAVING LAYERS

6202 DEFINITIONS

Segmental block paving – a system of individual shaped blocks arranged to form a continuous hard-wearing and durable surface.

6203 MATERIALS

a. Concrete Beams, Kerbs And Channelling
Cast in situ concrete edge beams or intermediate beams shall be constructed in accordance with the provisions SECTION 2000, as relevant. Prefabricated kerbing and channelling shall comply with the requirements of SECTION 2000, or as specified in the Particular Specification.
Backing concrete (also known as haunching) is used to support kerbs or edgings. It involves installing concrete behind the kerbs or edgings to provide stability and prevent movement.
The backing should extend up to around two-thirds of the height of the kerb or edging.

b. Bedding Sand

Bedding sand shall not contain any silt, clay or other deleterious impurities. The sand shall comply with the following grading requirements in **TABLE 6203/1** of the standard specification.

c. Precast Concrete Paving Blocks
Precast concrete paving blocks shall comply with the requirements of BS EN 1338. The blocks shall be of the class, type and thickness specified in the Particular Specification. The surface texture and colour of all blocks shall be uniform.

d. Recycled Plastic Blocks
Plastic paving blocks shall comply with the requirements of **KS 2913** or equivalent.

e. Natural Stone
Hand-cut natural stones or 'Cobblestones' are square or rectangular shaped, hand-cut natural stone blocks that are uniform in shape and generally 100-150 mm in size. They should comply with KS **965 and KS 2249**. For further information see **BS 7533** or equivalent.

f. Jointing Sand
100 % of the sand used to fill the joints between the concrete blocks shall pass through a 1.0 mm sieve and between 10 % and 15 % of it shall pass through a 0.075 mm sieve.

g. Herbicide and Pesticide
Any herbicide and pesticide used shall be environmentally friendly and shall be subject to the Engineer's approval.

6205 EXCUTION OF THE WORKS

a. Preparing The Underlying Layers
They shall be constructed and prepared in accordance with the requirements for the relevant pavement layers in **SERIES 3000 and 5000** of these specifications, or as may be specifically otherwise prescribed in the Particular Specification.

b. Concrete Edge And Intermediate Beams
Cast in-situ or prefabricated concrete edge beams or intermediate beams shall be constructed on the underlying pavement layer in accordance with the details shown on the drawings. No paving blocks shall be laid before the edge and intermediate beams have developed sufficient strength to withstand the construction forces. Refer to **SUBCLAUSE 6203 (a)** of standard specification.

c. Bedding Sand
A layer of bedding sand complying with the requirements of **SECTION 6203** shall be placed on top of the prepared surface of the underlying pavement layer. It shall be accurately levelled to an un-compacted thickness of 25 mm (± 5.0 mm), or as specified, so that the concrete paving blocks will have the correct level after compaction. The bedding sand shall be placed immediately before the concrete paving blocks are laid and shall be allowed to dry out to permit upward creep during compaction. The sand shall not be compacted before the blocks have been laid

d. Laying of the Blocks
It is important to get the level of the blocks in relation to the kerbs (or gaps in the kerb) correct such that water can quickly run off the pavement surfacing without ponding.
After the paving blocks have been laid, the pavement shall be compacted by two passes of a suitable vibrating-plate compactor operating at a frequency of 65 Hz to 100 Hz and a low amplitude.
After compaction of the pavement as described above, jointing sand shall be spread and brushed into the joints until the joints have been properly filled. Any surplus sand shall then be broomed off and the pavement shall then be subjected to two further passes by the plate vibrator. Jointing sand shall not be hosed into the joints. The block paving shall be inspected after 2 months, and the joints shall be re-sanded where required

6206 TOLERANCES

The completed concrete block paving shall comply with the following construction tolerances:

a. Line of pattern

i. Maximum deviation from a 3.0 m straight edge: 3.0 mm

ii. Maximum deviation from a 20 m straight line: 10 mm

b. Vertical deviation from a 3.0 m straight edge

i. At the edge beams: 3.0 mm

ii. Elsewhere: 3.0 mm

c. Differences in the surface levels

i. Between adjacent units: 2.0 mm

SERIES 7000 STRUCTURES

SECTION 7100 FOUNDATION FOR STRUCTURES

7101 SCOPE

This section covers all foundation work which, for the purposes of these Specifications, shall comprise those elements of construction below the level of the bottom surface of the footings, the pile-capping slabs or the caisson cover slabs, collectively hereinafter referred to as base or bases, which shall include all the associated temporary works.

7102 MATERIALS

Material used in the permanent foundation work shall comply with the requirements specified in Clause 7102 of the Standard Specification.

7103 GENERAL

a. Subsurface Data

The provisions of **CLAUSE 1203** shall apply in regard to any information supplied regarding any subsurface conditions likely to be encountered.

The Engineer shall, as often as he may deem necessary during the course of excavation, be entitled to call on the Contractor to conduct additional foundation investigations and/or tests at or below the intended founding levels in order to establish safe bearing pressures and founding depths.

b. Channel Preservation

The flow of any watercourse and the conservation of marine and freshwater life at the site shall be maintained at all times. Precautions shall be taken by the Contractor to maintain water quality standards.

7104 ACCESS AND DRAINAGE

a. General

This clause covers the provision of access, including the construction of cofferdams, and draining the excavations. Where it is unnecessary to provide access in terms of SUBCLAUSE 7104(b), the Contractor shall be paid separately for draining the excavations.

b. Access

Where temporary banks or artificial islands are constructed to afford access to the location where structural members, piles or caissons are to be constructed, the banks or islands shall be adequately compacted with a working platform at surface sufficient to safely support any constructional plant and provide temporary storage for materials required for incorporation in the works.

c. Cofferdams
Design and construction of any cofferdams shall comply with the requirements of BS EN 12812 or equivalent.

d. Drainage
The Contractor shall adopt suitable, effective drainage methods for preventing the ingress of water into excavations to allow works to proceed in dry conditions.

7105 EXCAVATION

This work shall include excavations, not provided for elsewhere in these Specifications, which are required for founding the structures as well as for any excavations required for demolition, extension or modification of existing bridges and culverts.
Excavation required for diverting, channelling or widening streams within 5 m of concrete structures shall be measured and paid for under **ITEM 71.02**. Excavations beyond the 5 m limit shall be measured and paid for under the appropriate Items of **SECTIONS 2100** and **3500**.
In addition, any other works related to excavations shall be in accordance to **Clause 7105** of the Standard Specifications.

7106 FOUNDING

The Contractor shall not be entitled to any additional payment as a consequence of any such variation in the dimensions or founding depths over and above that provided for in CLAUSE 7118, irrespective of the stage of construction at the time the instruction to make the variation is given.
No bases, caissons or piles shall be founded unless authorised by the Engineer. Each founding level shall be accurately measured and recorded by the Contractor and agreed with the Engineer.

7107 UTILIZATION OF EXCAVATED MATERIAL

Excavated material and material recovered from temporary works shall, if suitable, be utilised for backfill. Material unsuitable for use as backfill or in excess of the required quantity, shall be removed from the site or utilised as directed by the Engineer.
The free haul distance on excavated material and imported material for backfill shall be determined according to **SUBCLAUSE 1602 (g)**.

7108 BACKFILL AND FILL NEAR STRUCTURES

a. General
When backfill and fill are placed, the following precautionary measures shall be taken:
i. The material shall be placed simultaneously, in so far as is possible to approximately the same elevation on both sides of any structure. If conditions require the backfill or fill to be placed appreciably higher on one side than on the other the additional material on the higher side shall not be placed until authorised by the Engineer.

ii. The material behind abutments directly restrained at the top by the superstructure e.g. portal type of structures, shall be placed as shown on the Drawings or as directed by the Engineer.

iii. The material behind the walls of portal structures shall not be placed until the top slab has been placed and cured for the specified length of time, unless otherwise authorised by the Engineer.

b. Backfill
Excavated areas around structures shall be backfilled with approved material in horizontal layers not exceeding 150 mm in thickness after compaction. Each layer shall be moistened or dried to the optimum moisture content for the material and then compacted to a density of not less than 95 % MDD of AASHTO T180 for cohesive soils and gravels and not less than 100 % MDD of AASHTO T180 for cohesionless sands, or the density of the surrounding soil whichever is the least, except that, in the road prism,

the material shall be compacted to a density of not less than 95 % MDD of AASHTO T180.

c. Fill
The interface between selected granular material described in this section of the Specification and the adjacent earthworks under SERIES 3000 of this Specification shall be as shown on the Drawings or as instructed by the Engineer. Where selected granular fill material is not instructed the Contractor shall backfill the excavation behind and around the structure and up to ground level using the excavated material. Above ground level the Contractor shall use the same material as that being used for the adjacent embankment.

d. Fill Within Restricted Area
That part of the fill within a horizontal distance of 3 m from the vertical and inclined concrete faces of the structure and that part between the pillars of the spill-through abutments or that part shown on the Drawings, shall be termed “fill within restricted area".

7109 FOUNDATION FILL

If it is found that the material at the founding depth shown on the drawings does not have the required bearing capacity the excavations shall be deepened or widened at the discretion of the Engineer to provide adequate bearing capacity for the design load. Where greater depths are excavated the Engineer may order the Contractor to make up the difference in levels with foundation fill.
Foundation fill consisting of granular material shall be constructed in layers not exceeding 150 mm in thickness after compaction. Each layer shall be moistened or dried to the optimum moisture content for the material and compacted to a density of not less than 95 % MDD of AASTO T180 for cohesive soils and gravels, and not less than 100 % MDD of AASHTO T180 for cohesionless sands.

7110 GROUTING OF ROCK FISSURES

Fissures Where specified, fissures in the rock below and around the bases shall be sealed by pressure grouting with a neat cement grout or sand-cement grout or with a proprietary brand grout as specified. The water to cement ratio of the grout shall be approved in advance by the Engineer.
Grouting of the rock fissures shall be done by specialised operators with adequate experience in this class of work. The grouting shall be carried out in accordance with BS EN 12715.

7113 FOUNDATION PILLING PRELIMINARY ITEMS

This CLAUSE covers the construction of bearing piles of concrete, steel, timber or a combination of these materials. Details are well illustrated in **Clause 7113** of the Standard Specificatons.

7114 TYPES OF PILES

See **Clause 7114** of the Standard specification.

7115 INSTALLATION OF PILES

The installation of piles shall be in accordance to **Clause 7115** of the Standard specification.

7116 TESTING OF PILES

a. Integrity testing
i. Method of testing
Where integrity testing is called for, the method to be adopted shall be one of the following, as specified:
1. Impulse method;

2. Sonic Echo, Frequency Response or Transient Dynamic steady state vibration method;
3. Sonic logging method. Other methods may be considered subject to satisfactory evidence of performance. Particular requirements are detailed in the Special Specifications.

ii. Age of piles at time of testing
In the case of cast-in-place concrete piles, integrity tests shall not be carried out until the number of days specified have elapsed since pile casting.

iii. Preparation of pile heads
Where the method of testing requires the positioning of sensing equipment on the pile head, the head shall be broken down to expose sound concrete and shall be clean, free from water, laitence, loose concrete, over-spilled concrete and blinding concrete and shall be readily accessible for the purpose of testing.

iv. Specialist Sub-contractor
The testing shall be carried out by specialist personnel or an independent integrity testing firm, subject to demonstration of satisfactory performance on other similar contracts before the commencement of testing.

v. Interpretation of tests
The interpretation of tests shall be carried out by competent and experienced persons. The Contractor shall give all available details of the ground conditions, pile dimensions and construction method to the specialist before the commencement of integrity testing in order to facilitate interpretation of the tests.

vi. Report
Preliminary results of the tests shall be made available within 24 hours of carrying out the tests. The test results and findings shall be recorded and made available within 10 days of the completion of each phase of testing. The report shall contain a summary of the method of interpretation including all assumptions, calibrations, corrections, algorithms and derivations used in the analyses. If the results are presented in a graphical form, the same scales shall be used consistently throughout the report. The units on all scales shall be clearly marked.

vii. Anomalous results
In the event that any anomaly in the acoustic signal is found in the results indicating a possible defect in the pile the Contractor shall demonstrate that the pile is satisfactory for its intended use or shall carry out remedial works to make it so. Sonic logging tubes shall be grouted up after the Contractor has demonstrated that the pile is satisfactory.

b. Static Load Tests
i. General
The Engineer may order certain selected piles to be load tested. The procedure for loading tests shall comply with the requirements of BS 8004 and SECTION 7100. During the period of testing, driving of other piles or other activities which may affect the testing shall cease. The Engineer may specify Maintained Load (ML) or Constant Rate of Penetration (CRP) Tests.

ii. Test data
Within 24 hours of having completed the tests a preliminary copy of the test records shall be made available which shall show:
1. For a ML test; for each stage of loading, the period for which the load was held, the load and the maximum pile movement at the end of the stage.
2. For a CRP test; the maximum load reached and a graph of load against penetration.
The complete set of recorded data as detailed in the Special Specifications or requested by the Engineer shall be provided within 7 days of completion of the test.

iii. Loading
For ML tests the maximum test load applied in a proof test (working piles) shall be equal to the sum of the design verification load (DVL) plus 50 % of the specified working load (SWL). The loading and unloading shall be carried out in stages as shown in TABLE

7117 CAISSONS

Caissons shall, for the purposes of these Specifications, be hollow concrete vessels which are wholly or partly constructed at a higher level and lowered by internal excavation or kentledge to the desired founding level to form structural bearing members. Caissons may be of circular, rectangular or any other shape and may contain one or more excavation compartments, all as detailed on the Drawings. Unless otherwise specified hereafter, the provisions of BS 8004 shall apply for the construction of caissons.

SECTION 7200 FALSEWORK, FORMWORK & CONCRETE FINISH

7201 SCOPE

This section covers the design, supply, erection and removal of all falsework and formwork used in the construction of permanent work. This section also describes the classes of surface finishes on formed and unformed concrete surfaces.

7202 MATERIALS

a. General

The materials used in the construction of falsework and formwork shall be suitable for the pur pose for which they are required and be of such quality as to produce the specified standard of work

b. Falsework

The timber, structural steel and scaffolding used shall be free from defects that may prejudice the stability of the falsework.

c. Formwork

i. Timber

1. **Tongue-and-groove boarding**

Tongue and-groove boarding or grooved boards and plastic foam strips shall be used for smoothest possible board marked finishes. Suitably dried timber shall be used which will not warp, distort or cause discolouration of the concrete. The boards shall be of uniform width and as specified on the Drawings or in the Bill of Quantities or as prescribed by the Engineer. Boards shall be supplied in lengths not shorter than 3 m.

2. **Plywood**

Exterior grade plywood shall be used. Panels shall be used with the grain of the outer face parallel to the span. The maximum curvature of any plywood sheet shall be de fined in relation to the sheet thickness and direction of grain. All sheets in any continuous curved form shall be aligned with the grain in the same direction.

ii. Steel forms to exposed surfaces

For classes **F2** and **F3** surface finish as defined in **SUBCLAUSE 7207**, the individual panels shall be assembled sufficiently rigidly and so clamped as not to deform or kick during han dling, vibration or under the pressure of the wet concrete.

The surfaces of forms which are to be in contact with the concrete shall be clean, free from deposits or adhering matter, ridges or spatter which will impart irregularities and blemishes to the concrete surface, and shall also be free from indentations and warps. Mould oil with rust inhibiting properties shall be used.

iii. Void formers

Void formers used in permanent work shall be subject to the approval of the Engineer

iv. Chamfer and recess fillets Timber fillets used for forming chamfers and recesses on exposed surfaces shall be made from new material unless otherwise authorised.

v. Jack rods for sliding formwork

The jack rods, base plates and couplers shall be strong enough to carry the design load under all operating conditions without buckling, distorting or causing damage to the concrete. Jack rods which are to remain permanently embedded in the concrete shall comply with the requirements of **CLAUSES 7303** and 7305. Under no circumstances shall bent rods be used in the work. The jack rods used shall have a diameter of at least 25 mm.

vi. Permanent Formwork Permanent formwork (also known as Stay-in-Place formwork) is a structure that is used to contain the green concrete placed in order to mould it into the required dimensions and support it until it is able to support itself and can be participating or non-participating permanent formwork.

7203 GENERAL

Notwithstanding approval given by the Engineer for the design and drawings prepared by the Contractor and the acceptance of the falsework and formwork as constructed, the Contractor shall remain solely responsible for the safety and adequacy of these temporary works and the Contract Insurances shall fully indemnify the Employer and Engineer in this respect.

After having constructed the falsework and formwork, and prior to placing the reinforcing steel and/ or the concrete, the Contractor shall inspect the falsework and formwork to confirm that the work complies in all respects with the Specifications.

7204 DESIGN

The design of falsework and formwork shall be in accordance to **Clause 7204** of Standard Specification.

7205 CONSTRUCTION

The construction of falsework and formwork shall be in accordance to **Clause 7205** of Standard Specification

7206 REMOVAL OF FALSWORK AND FORMWORK

Falsework and formwork shall not be removed before the concrete has attained sufficient strength to support its own weight and any loads which may be imposed on it. In the absence of other information, for ordinary structural concrete made with Portland cement or Sulphate-resisting Portland cement of strength class 42.5 or above, the period before removal shall be in accordance with the minimum periods given in TABLE **7206/1.** The TABLE **7206/1** relates to the surface temperature of the concrete but, when this cannot be obtained, air temperature may be used. The TABLE **7206/1** shall not be used if accelerated curing method or sliding forms are used.

7207 FORMED SURFACE, CLASSES OF FINISH

a. General

In addition to complying with the tolerances specified in CLAUSE 1904, the surface finish on formed concrete surfaces shall also comply with the following requirements.

b. Class F1 Surface Finish

After repair work has been done to surface defects in accordance with SUBCLAUSE 7208(b), no further treatment of the as-stripped finish will be required. This finish is required on concealed formed surfaces. Surfaces that in the final stage will be covered with backfill shall have a finish of Class F1.

c. Class F2 Surface Finish

This finish shall be equivalent to that obtained from the use of square-edged timber panels and boards wrought to the correct thickness, or shutter boards or steel forms arranged in a regular pattern. This finish is intended to be left as struck but surface defects shall be remedied in accordance with SUBCLAUSE 7208(b). Although minor surface blemishes and slight discolouration will be permitted, large blemishes and severe stains and discolouration shall be repaired where so directed by the Engineer. This surface finish is intended for exposed formed surfaces that cannot readily be seen by the general public as in the case of culverts, remote structures and structures to which access is restricted.

d. Class F3 Surface Finish

This finish may be achieved by first producing a Class F2 surface finish with joint marks which form an approved regular pattern to fit in with the appearance of the structure. All projections shall then be removed, irregularities repaired and the surface rubbed or treated to form a smooth finish of uniform texture, appearance and colour. High quality steel forms or other forms with linings which may be neoprene, rubber or other approved, may be used to produce an F3 finish. Steel forms manufactured specifically for

the project shall be approved by the Engineer. An F3 surface finish is required on all exposed formed surfaces unless a Class F2 finish is specified.

e. Curved Surfaces
Plywood formwork or prefabricated steel forms may be used. Plywood shall be bent as described in SUBCLAUSE 7202 (c). Class F2 finishes may be formed by dressing of tight surfaces formed on a face built up of splines cut to make the required curved surface. Any linings used to provide the final surface upon which the concrete is formed shall not bulge, wrinkle or otherwise deform when subjected to temperature and moisture changes.

f. Board Surface Finish
This finish shall be similar to F2 but obtained by using tongue-and-groove timber boarding arranged in an approved regular pattern. The finish is intended to be left as struck but surface defects shall be remedied in accordance with SUBCLAUSE 7208(b) and large fins trimmed where directed by the Engineer.

g. Treatment After Casting
The Special Specifications shall detail any treatments that may be required to give architectural finishes. These may include acid etching; blasting using sand or other abrasives; grinding or polishing; mechanical fracturing using scabbling or hammering tools.

h. Protecting The Surfaces
The Contractor shall ensure that all concrete surfaces are protected from rust marks, spillage and stains of all kinds and other damage during construction. The Contractor shall ensure that colour variations and physical irregularities are kept within acceptable limits in accordance with normal good practice.

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

TABLE 7207/1: TOLERANCES			
Class of finish	Tolerances In mm (See Note)		
	A	B	C
F1	10	10	+25 to -10
F2	5	10	+/ -15
F3	2	5	+/ -10

7208 REMEDIAL TREATMENT OF FORMED SURFACES

a. General
Agreement shall be reached between the Engineer and the Contractor regarding any remedial treatment to be given after the surfaces have been inspected immediately after the formwork has been removed. The treatment shall be carried out without delay by the Contractor at their expense. No surfaces may be treated before inspection by the Engineer. Any concrete which is found to have been treated before inspection by the Engineer may be rejected.

b. Repairs to Surface Defects
Surface defects such as small areas of honeycombing, cavities produced by form ties, large isolated blow-holes, broken corner edges, etc, shall be repaired with mortar having a cement to sand ratio equal to that of the concrete being repaired.

For the repair of large or deep areas of honeycombing and defects, special approved methods and techniques such as pressure grouting, use of epoxy bonding agents, etc, may be used.
Where the extent of honeycombing or defects is deemed by the Engineer to be of such a degree that doubt exists about the effectiveness of repair work the Contractor shall perform a load test in accordance with SUBCLAUSE 7414(b) at their cost. If the test is not undertaken or fails to prove the structural safety of the repaired member, the structure shall be rebuilt in part or in full at the Contractor's cost.
Where the concrete has been damaged by adhesion to the formwork panel, the cracked and loose concrete shall be removed; or where the fresh concrete has lifted off at construction joints, the crack shall be scraped out immediately on both sides of the wall to a depth of at least 50 mm. The cavities so formed shall then be repaired as described above.

c. Rubbing the surfaces
If the finish of exposed formed surfaces does not comply with the requirements for uniformity of texture, appearance and colour, the Contractor shall, when so instructed by the Engineer, rub down the exposed surfaces of the entire structure or of any part of it as specified below.
The surface shall be saturated with water for at least one hour. Initial rubbing shall be done with a medium-coarse carborundum stone and application of a small amount of mortar having a sand to cement ratio equal to that of the concrete being repaired. Rubbing shall be continued until all form marks, projections and irregularities have been removed and a uniform surface has been obtained. The paste produced by the rubbing shall be left in place.

7209 UNINFORMED SURFACES: CLASSES OF FINISH

a. Class U1 – Screeded Surface Finish (rough)
This surface finish is required on those portions of bridge decks or culvert decks which are to receive bituminous or concrete surfacing or which are to be covered by backfilling material.
Where the placing and compacting of the concrete have been completed as specified in CLAUSE 7407, the top surface shall be screeded off with a template to the required cross-section and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, so as to leave the surface slightly rough but generally at the required elevation.

b. Class U2 Floated Surface Finish
This surface finish is required on footways, the tops of wing walls and retaining walls, exposed concrete shoulders and unpaved areas on bridge decks, and the inverts of box culverts.
The surface shall first be given a Class U1 surface finish and after the concrete has hardened sufficiently, it shall then be wood-floated to a uniform surface free from trowel marks.

c. Class U3 Trowelled Surface Finish (smooth)
This surface finish shall be made at bearing areas and the tops of concrete railings, exposed upper surfaces of floor slabs and upper surfaces in contact with water. The surface shall first be given a Class U1 surface finish, and after the concrete has hardened sufficiently, it shall be floated with a steel float to a smooth surface to within the dimensional tolerances specified in SUBCLAUSE 1904(h). Rubbing with carborundum stone after the concrete has hardened shall be allowed but under no circumstances will plastering of the surface be permitted.

d. Class U4 Brushed Surface Finish (textured)
For non-skid surfaces such as on footways, bridge decks and exposed culverts, the surface shall be brought to a Class U2 finish and shall then be given a broom finish. The corrugations so produced shall be approximately 1.0 mm deep, uniform in appearance and width and shall be perpendicular to the centre line of the pavement.
Other surface finishes may be required which shall be detailed in the Special Specifications or on the Drawings.

SECTION 7300 STEEL REINFORCEMENT FOR STRUCTUTES

7301 SCOPE

This section covers the furnishing, inspection, testing, certification and placing of reinforcing steel in concrete structures.

7303 STORING THE MATERIALS

Reinforcing steel shall be stacked off the ground and, in aggressive environments, shall be stored under cover. It shall be protected at all times from contamination and corrosion.

7304 INSPECTION, TESTING AND CERTIFICATION OF STEEL FOR THE REINFORCEMENT OF CONCRETE

The Inspection, Testing and Certification of steel for the reinforcement of concrete shall be in accordance to Clause 7304 of Standard Specification

7305 BENDING THE REINFORCING STEEL

Reinforcement shall be cut or cut and bent to the dimensions shown on the bending schedules and in accordance with **BS 8666** or **BS EN ISO 3766** or as prescribed by the Engineer.

7307 PLACING AND FIXING

Reinforcement shall be positioned as shown on the Drawings and shall be firmly secured in position within the tolerance given in **SUBCLAUSE 1904(f)** by being tied with 1.6 mm or 1.25 mm diameter annealed wire or by suitable clips being used, or, where authorised, by tack welding. Any cover and spacer blocks required to support the reinforcement shall be as small as may be consistent with their use and shall be of an approved material and design.
The concrete cover over the projecting ends of ties or clamps shall comply with the specifications for concrete cover over reinforcement detailed in **SUBCLAUSE 7308.**

7308 COVER AND SUPPORTS

The term "cover" in this context shall mean the minimum thickness of concrete between the surface of the reinforcement and the face of the concrete.
The minimum nominal cover shall be as shown on the Drawings. Where no cover is indicated, the minimum nominal cover provided shall be at least equal to the appropriate values greater of the following.
i. Diameter of the bar; if maximum aggregate size ≤ 32 mm
ii. Diameter of the bar + 5 mm; if maximum aggregate size > 32 mm
iii. 10 mm
iv. Minimum cover required from durability aspects
An allowance of 5 mm to 15 mm is added in above values depending upon the Quality Assurance.

7309 LAPS AND JOINTS

Laps, joints, splices and mechanical couplings shall be applied only by the specified methods and at the positions shown on the Drawings or as authorized.

7310 WELDING

Reinforcement shall be welded only where shown on the Drawings or as authorized.
Flash butt welding shall be done only with the combination of flashing, heating, upsetting and annealing to the satisfaction of the Engineer, and only those machines which control this cycle of operations automatically shall be used.
Metal-arc welding of reinforcement shall be done in accordance with BS EN 1011-1 and

BS EN 1011 2, and with the recommendations of the reinforcement manufacturers, subject to approval by the Engineer and the satisfactory performance of trial joints. Hot-rolled high-yield-stress steel shall be preheated to between 240°C and 280°C and only low-hydrogen electrodes may be used.

SECTION 7400 CONCRETE FOR STRUCTUTES

7401 SCOPE

This section covers the manufacture, transport, placing and testing of concrete used in the Works where plain, reinforced or prestressed concrete is specified.

7402 MATERIALS

a. Cement

Cement used for concrete shall be any of the following:
i. Common cements and combinations complying with the requirements of KS-EAS 18, BS EN 197-1 or equivalent standard on approval of the Engineer.
ii. Sulphate-resisting common cements conforming to the requirements of KS-EAS 18 or BS EN 197-1, but only where shown on the Drawings or instructed by the Engineer.
iii. In prestressed concrete members or units, the use of Portland blast-furnace cement will not be permitted. A 50/50 mixture of Portland cement and ground granulated blast-furnace slag may be used only if authorised in the Special Specifications or by the Engineer.

b. Aggregates

Both coarse aggregate and fine aggregate (sand) shall comply with the requirements of BS EN 12620 or equivalent, subject to the following: The properties of aggregates shall meet the requirements of TABLE 7402/1 in the Standard Specifications.

c. Water

Water for use in mixing concrete and mortar and for curing and related purposes shall be obtained from a source approved by the Engineer and shall comply with the requirements of BS EN 1008.
Water shall be clean, fresh and free from detrimental concentrations of acids, alkalis, salts, sugar and other organic or chemical substances that could impair the durability and strength of the concrete or the imbedded steel.

d. Admixtures

Admixtures shall not be used in concrete without the approval of the Engineer who may require that tests be conducted before the admixtures be used to prove their suitability. Admixtures, if their use is allowed, shall comply with the following requirements:
i. Admixtures shall be used only in liquid form and shall be batched in solution in the mixing water by a mechanical batcher capable of dispensing the admixture in quantities accurate to within 5 % of the required quantity.
ii. All admixtures shall comply with the requirements of ASTM C-494/C 494M or AASHTO M-194 or BS EN 934 or equivalent and shall be of an approved brand and type.
iii. Air entraining agents shall comply with the requirements of ASTM C-260 or AASHTO M-154 or equivalent.
iv. Admixtures shall not contain any chlorides.

e. Curing agents

Curing agents shall be tested in accordance with ASTM C-156 and shall comply with the requirements of ASTM C-30907, except that the loss of water within 72 hours shall not exceed 0.40 kg/m2. Only approved curing agents shall be used.
Curing agents shall be clear or pigmented as specified or required by the Engineer. A certificate from an approved testing laboratory stating that the curing compound complies with the specified requirements shall be submitted to the Engineer.

7403 STORING THE MATERIALS

a. Cement

Cement stored on the site shall be kept under cover which provides adequate protection against moisture and other factors which may promote deterioration of the cement. When the cement is supplied in bags, the bags shall be closely and neatly stacked to a height not exceeding 12 bags and arranged so that they will not be in contact with the ground or the walls and can be used in the order in which they were delivered to the site.

b. Aggregates

Aggregates of different nominal sizes shall be stored separately and in such a manner as to avoid segregation occurring. Intermixing of different materials and contamination by foreign matter shall be avoided. Aggregates exposed to a saline environment shall be covered to protect them from salt contamination.

c. Storage Capacity

The storage capacity provided and the quantity of material stored (whether cement, aggregates or water) shall be sufficient to ensure that no interruptions to the progress of the work will be occasioned by the lack of any materials.

d. Deteriorated Material

Deteriorated or contaminated or otherwise damaged material shall not be used in concrete. Such material shall be removed from the site without delay.

7404 CONCRETE QUALITY

a. General

The Contractor shall be responsible for the design of the concrete mix and for the proportions of the constituent materials necessary for producing concrete which complies with the requirements specified below for each class of concrete.
The Contractor shall obtain the Engineer's approval of their concrete mix proportions at least 30 days prior to its use in the Works.

b. Strength Concrete Classification

Concrete for use in the Works shall comply with the requirements of BS EN 206-1. The concrete strength class according to BS EN 206:2013+A2:2021 shall be classified as shown in TABLE 7404/1 herein. The class of concrete to be used in each part of the Works shall be as stated in the Bill of Quantities or on the Drawings.
The aggregate size shall be selected complying the requirements in accordance with SUBCLAUSE 7402(b).

c. Durability Concrete

Exposure conditions are chemical and physical conditions to which the structure is exposed in addition to the mechanical actions. Environmental conditions are classified according to TABLE 7308/1.

d. Bleeding

The concrete shall be so proportioned with suitable materials that bleeding is not excessive.

e. Consistency and Workability

The concrete shall be of suitable workability for the nature of the work to be executed without the excessive use of water so that it can be readily compacted into the corners of the formwork and around the reinforcement, tendons and ducts without the material segregating. The maximum free water: cement ratio under any circumstances is 0.5.

f. Sulphate Content

Excessive amount of sulphate in derived from aggregates or other constituents in concrete can cause disruption due to expansion. The total water-soluble sulphate content of the concrete mix, expressed as SO3, shall not exceed 4% by mass (m/m) of the cementitious binder content of the mix.

g. Pumped Concrete
Where pumping of the concrete is approved by the Engineer, the concrete mix to be pumped shall be so designed that:
i. Settlement will not exceed 125 mm;
ii. Graded aggregate and suitable admixtures be used, wherever necessary, with a view to improving the pumpability of the mix; and
iii. Shrinkage capacity shall not be excessively higher than that of ordinary concrete mixes.

7406 MIXING

a. General
Mixing the material for concrete shall be conducted by an experienced operator. Unless otherwise authorised, mixing shall be carried out in a mechanical batch-mixer of an approved type which will be capable of producing a uniform distribution of ingredients throughout the batch.

b. Charging the Mixer
The sequence of charging the ingredients shall be subject to approval by the Engineer, and, unless otherwise instructed, the same sequence of charging the ingredients shall be maintained. The volume of the mixed material by batch shall not exceed the volume recommended by the manufacturer of the mixer.

c. Mixing and Discharging
The period of mixing shall be measured from the time when all the materials are in the drum until the commencement of discharge.
Concrete shall be mixed in a modern batch type mixer which shall be to the approval of the Engineer. Mixing for each batch shall continue until there is uniform distribution of the materials and uniformity of colour and consistency of the concrete. Admixtures for which approval in writing has been given by the Engineer shall be introduced into concrete by means of automatic dosing equipment.

d. Maintaining and Cleaning the Mixer
If the mixer has stopped running for a period in excess of 30 minutes, it shall be thoroughly cleaned-out particular attention being given to the removal of any build-up of materials in the drum, in the loader, and around the blades or paddles. Worn or bent blades and paddles shall be replaced.

e. Standby Mixer
When sections are cast where it is important for the casting to continue without interruption, a standby mixer shall be held in readiness to run on 15 minutes notice should the stock mixers break down.

f. Ready-mixed Concrete
Where ready-mixed concrete is delivered at the site, the requirements of BS 8500-1 and 2 and BS EN 206-1 or equivalent shall have priority over the requirements specified in this section should inconsistencies occur.

7407 TRANSPORTING, PLACING AND COMPACTING

a. General
Concrete shall be handled from the place of mixing to the place of final deposit as rapidly as practicable by means that will prevent segregation or loss of any ingredient. Wherever practicable, concrete shall be emptied from a mixer directly into the skip which shall then be transported to the place of final deposit and the concrete shall be discharged as close as possible to its final position to avoid rehandling or flowing.
Should the Contractor propose to use concrete pumps for the transporting and placing of concrete he shall submit full details of the equipment and operating techniques he proposes to use for the approval of the Engineer.

b. Placing
Whenever possible, concrete shall be deposited vertically into its final position. Unless otherwise agreed by the Engineer on the basis of satisfactory site trials, concrete shall not be dropped into place from a height exceeding 1 metre. Where chutes are used, their length and slope shall be such as not to cause segregation, and suitable spouts and baffles shall be provided at the lower end to minimise segregation. The displacement of concrete by vibration instead of by direct placing is not permitted.

c. Placing under water
Placing under water shall be allowed only in exceptional circumstances where it is not feasible to dewater the location before the concrete is placed. No concrete shall be placed in running water. Underwater concrete shall be placed by means of tremies. Full details of the method proposed by the Contractor shall be submitted in advance for approval. Placing by skip or pipeline will also be considered under certain circumstances as approved by the Engineer.

d. Compaction
Concrete shall be fully compacted by approved means during and immediately after placing. It shall be thoroughly worked against the formwork, around reinforcement bars, tendons, ducts and embedded fittings and into corners to form a solid mass free from voids.
The concrete shall be free from honeycombing and planes of weakness, and successive layers of the same lift shall be thoroughly bonded together.

7408 CONSTRUCTION JOINTS

All the joints shall be constructed in accordance to **Clause 7408** in the Standard Specifications.

7409 CURING AND PROTECTING

Formwork shall be retained in position for the appropriate times given in CLAUSE 7206, and as soon as may be practicable, all exposed concrete surfaces shall be protected from loss of moisture by one or more of the following methods:

a. Method 1
Retaining formwork in place for the full curing period.
b. Method 2
Ponding the exposed surfaces with water, except where atmospheric temperatures are low, i.e. less than 5°C.
c. Method 3
Covering it with sand or mats made from a moisture-retaining material, and keeping the covering constantly wet.
d. Method 4
Constantly spraying the entire area of the exposed surfaces with water (only on surfaces where sand cover or ponding is impossible).
e. Method 5
Covering with a waterproof or plastic sheeting firmly anchored at the edges.
f. Method 6
Using an approved curing compound applied in accordance with the manufacturer's instructions, except that, where the surface has to be subsequently waterproofed, coated or gunited, this method may not be used.
g. Method 7
Steam curing the concrete (precast units).
h. General
The method of curing adopted shall be subject to the Engineer's approval and shall not cause staining, contamination, or marring of the surface of the concrete.

7410 ADVERSE WEATHER CONDITIONS

a. Cold weather
Concrete shall not be placed during falling temperatures when the ambient air temperature falls below 7°C or during rising temperatures when the ambient air temperature is below 3°C. When concrete is placed at air temperatures below 5°C the

concrete temperature shall not be below 10°C, for which purpose heating of the water and/or the aggregate shall be permitted. The Contractor shall make all the necessary arrangements for heating the material. Heated water and aggregate shall first be mixed and the cement shall then be added only while the temperature is below 30°C.

b. Hot weather

When the ambient air temperature exceeds 30°C during concreting, the Contractor shall take measures to control the temperature of the concrete ingredients so that the temperature of the placed concrete will not exceed 30°C unless otherwise determined by the Engineer.

c. Precautionary Measures For Using Sliding Formwork

During sliding operations in cold weather, the water only, or the water and the aggregate, shall be heated to ensure that the concrete temperature will not drop below 10°C until it has attained a strength of 5 MPa.

7411 PIPES AND CONDUITS

No pipes and conduits other than those shown on the Drawings shall be embedded in the concrete without the Engineer's approval. The clear space between such pipes or between such pipes and any reinforcing steel shall be at least 40 mm or the maximum size of the aggregate plus 5 mm, whichever is the greater. The thickness of the concrete cover over pipes and fittings shall be at least 25 mm.

7413 PRECAST CONCRETE

This Clause applies to all reinforced and prestressed concrete members other than precast concrete piles, culverts and pipes in so far as they are dealt with separately elsewhere in these Specifications. All precast members shall be manufactured in accordance with the requirements specified for cast in situ members in so far as these requirements are relevant.

7414 QUALITY OF WORKMANSHIP AND MATERIALS

a. Criteria for Compliance with the Requirements

Routine inspection and quality control will be done by the Engineer as specified in SECTION 7400. The criteria for compliance with the requirements specified for 28-day characteristic compressive strength shall be as specified in CLAUSE 7404 for full acceptance, and as specified in CLAUSE 7407 for conditional acceptance.

b. Procedure in the Event of Non-Compliance with the Requirements

Any lot represented by test cubes failing to comply with the criteria specified for the characteristic strength shall be rejected, or the Engineer may allow, at their discretion, the following tests to be conducted in order to decide whether the concrete may be left in position at further reduced payment:

i. The Engineer may allow the elements or units concerned to be cured for an additional period not exceeding 56 days. Thereafter the Contractor shall drill cores in accordance with BS EN 12504-1 or equivalent, and the Engineer will evaluate these cores in accordance with BS EN 13791 or equivalent.

ii. Where the Engineer so directs, full-scale load tests shall be conducted in accordance with BS EN 1992 or equivalent to determine whether any particular structure or member can be left in position. The cost of such tests shall be for the Contractor's account regardless of the outcome of the tests.

c. Tests Ordered by the Engineer

Where the routine testing of concrete cubes is not conducted on the site by the Engineer, he may order the Contractor to have the concrete cubes, which have been made by the Engineer, tested at an approved testing laboratory, in which case no separate payment will be made for such tests.

7415 DEMOLITION AND REMOVAL OF EXISTING CONCRETE

Where partial demolition is required for extension work to existing structures the first three paragraphs of CLAUSE 2214 shall apply. In addition the following shall apply:
a. The Contractor shall take great care to ensure that the reinforcement required to tie in the extension work is not cut off or damaged in the demolition process. Where reinforcement has been cut off, or where in the opinion of the Engineer, the reinforcement has been damaged to such an extent that it will not adequately perform its function, the Contractor shall, at his own expense, install dowel bars of the same diameter as the bar cut off or damaged, all to the satisfaction of the Engineer.

b. Only hand operated breaking equipment shall be used for the demolition of concrete where extension work is required.

SERIES 8000 ANCILLARY ROADWORKS

SECTION 8100 MARKER & KILOMETRE POSTS

8101 SCOPE

This section covers the furnishing and installation of new as well as removal, renovating and re-erection of existing kilometre and marker posts in position and in accordance with the dimensions as shown on the Drawings or as directed by the Engineer.

8102 MATERIALS

a. Concrete
Concrete work shall be carried out in accordance with the provisions of **SECTIONS 7200, 7300 and 7400**.

b. Paint
Paint for marker and kilometre posts shall be non-reflectorised road-marking paint as specified in **SECTION 8500**. Paint for the recess in the marker posts shall be a retro-reflective paint as indicated in the Particular Specifications, or as directed by the Engineer. The paint for the engraved letters shall be black reflective paint.

8103 FABRICATING

Marker and kilometre posts shall be fabricated to the dimensions shown on the Drawings in Class C16/20 concrete. The posts shall be reinforced as shown on the Drawings and shall have an F3 surface finish as defined in **CLAUSE 7207**
The recess near the top of the kilometre post shall be engraved to a depth of 10 mm with text 17 mm thick and 100 mm high.

8104 ERECTING

Marker posts shall be erected after the seal has been completed. They shall be located at such spacing as the Engineer directs with their outside edges in line with the shoulder breakpoint.
The tops of the marker blocks shall be at a constant height above the centreline of the road.
The marker posts shall be painted immediately after placing.
Kilometre and marker posts shall be maintained and protected during the entire construction period and any that are damaged or broken before the certificate of completion has been issued, shall be repaired or replaced, as may be required, at the Contractor's own cost.

SECTION 8200 GUARDRAILS

8201 SCOPE

This section covers the supplying, installing and maintaining of metal guardrails at

locations and in accordance with the details, dimensions and design shown on the Drawings or as directed by the Engineer.

8202 MATERIALS

a. Guardrails

Metal beam guard rails shall be corrugated sheet steel beams conforming to AASHTO M180 and shall be zinc coated after fabrication in accordance with ASTM A 653.
The dimensions of guardrails and end units shall be in accordance with the details shown on the Drawings. Guardrails shall be supplied together with all the bolts, nuts, washers and fixing materials required, including the bolts for fixing the guardrails to the posts in accordance with AASHTO M180 and be zinc coated after fabrication in accordance with AASHTO M 232 Class C.

b. Guardrail Posts

i. Timber posts Timber posts shall be supplied in lengths as shown on the Drawings and shall comply with the requirements of BS 5268-2 or equivalent. Posts shall have a top diameter of not less than 150 mm. Posts with a top diameter up to 230 mm will be acceptable, provided that posts with widely varying diameters shall not be used together in the same length of guardrail.
Timber posts and spacer blocks shall be treated in accordance with BS 8268-5 or equivalent, with a copper-chrome-arsenic compound for timber preservation, or with creosote, complying with BS 5268-5, or equivalent. Alternatively if so specified the preservative named in the Special Specifications shall be used. After the posts have been treated, they shall not be sawn, drilled or shaped.
Where the cutting of posts is unavoidable after treatment, the Engineer may permit the required length to be cut off from the bottom of a post, provided that the exposed area is subsequently thoroughly treated with creosote, or equivalent.
Timber posts shall not exhibit excessive cracking at the ends, particularly cracks aligned at an angle to the guardrail exceeding 45°. Posts which, in the opinion of the Engineer, exhibit a degree of cracking that would render them unfit for service during a shorter than normal life shall not be used.
ii. Steel posts
Steel posts shall be UNP steel profiles 120 x 85 x 7 mm or of the type and size shown on the Drawings or described in the Special Specifications. Steel posts should confirm to AASHTO M270 and shall be zinc coated in accordance with AASHTO M111.

c. Galvanising

Unless specified otherwise in the Special Specifications, all guardrails, bolts, nuts and washers shall be galvanised with a hot-dip (galvanised) zinc coating, which complies with the requirements of AASHTO designation M232M/97 or equivalent.

d. Reflective Plates

V-shaped reflective plates shall be manufactured from 1.5 mm thick mild steel plate to the dimensions shown on the Drawings. When supplied with galvanised guardrails, they shall also be galvanised, and when supplied with painted guardrails, they shall be finished in white baked enamel. The outer surfaces shall be coated with engineering-grade retro-reflective material that complies with the provisions of BS EN 12899 – 3 or equivalent standards in the colours shown on the Drawings. Holes for fixing shall be drilled before the reflective plates are galvanised or painted.

e. Splices and End Connections

Splices and end connections shall develop full design strength of rail elements. End sections and terminal connectors shall confirm to AASHTO M 180, Class B, Type II.

f. Bolts and Nuts

Standard bolts and nuts shall confirm to ASTM A 307 and AASHTO M291 Grade A. High strength bolts shall confirm to AASHTO M164 or ASTM A 449.

8203 CONSTRUCTION

a. Erection

The holes for the timber posts shall be of sufficient size to permit the proper setting of the posts and to allow sufficient room for backfilling the hole and tamping the filling. At least 1.0 m of a post shall be embedded in the ground.
The hole for the concrete block at the end of a length of guardrail shall be neatly excavated and the top 120 mm shuttered.
Reflective plates shall be fixed in accordance with the details shown on the Drawings. The reflective surfaces shall be arranged with the colours as shown on the Drawings.

b. Painting
The following instructions shall apply where guardrails are to be painted:
i. Before being fixed the guardrails shall be cleaned, primed and painted as specified in CLAUSE 7808. After erection, all abraded or damaged surfaces shall be repainted as specified in CLAUSE 7808. Galvanised guardrails shall not be painted.
ii. When existing guardrails are required to be repainted they shall be thoroughly cleaned with wire brushes and descaled with suitable tools to remove all rust and loose and oxidised paint. They shall then be washed down with water, dried, and all exposed steel surfaces shall be given a coat of zinc based primer.
iii. The entire prepared surface shall then be given a full coat of zinc-based primer and two coats of paint as specified in CLAUSE 7808.

8204 FINISH REQUIREMENTS

The completed guardrail shall have a neat appearance and shall not show any visible deviations from line and grade.

8205 REMOVING, RENOVATING AND RE-ERECTING EXISTING GUARDRAILS

a. Removing the Guardrails
All guardrails, reflective plates and end units shall be loosened. Posts shall be carefully dug out and the holes shall be filled and compacted in 150 mm layers.
Where material is intended for re-use, it shall first be unpacked for inspection by the Engineer for deciding which material will be suitable for re-use. Suitable material shall then be stored separately from material that is unsuitable for re-use.

b. Renovating the Guardrails
Guardrails, end units and steel posts suitable for reuse shall be taken to the workshop for cleaning and painting. Rust and existing paint shall be completely removed and minor indentations hammered out. The guardrails shall then be re-galvanised or receive surface treatment and be painted as described in **CLAUSE 7808.**

c. Re-erection
The guardrails shall be erected in the positions as indicated and all the removed material suitable for re-use, and new replacement material, shall be used. Re-erection shall be as specified for new guardrails, including fixing the retro-reflective plates.

SECTION 8400 ROAD SIGNS

8401 SCOPE

This section covers the supply and erection of permanent and temporary road traffic signs alongside and over the carriageway, ramps and cross roads at intersections and interchanges and at the locations indicated on the Drawings or as directed by the Engineer

8402 DESCRIPTION

This work shall consist of furnishing and placing road signs, in accordance with these Specifications, at the locations and of the dimensions shown on the Drawings or as directed by the Engineer and in compliance with the **RDM Volume 6 Part 2**: Traffic Signs.

8403 MATERIALS

Concrete for foundations shall be Class C25/30 to be mixed and placed as specified in **SECTIONS 7100** and **7400** of these Specifications.
The material and fabrication of signs shall be in accordance to TABLE 8403/1: SPECIFICATIONS & STANDARDS.

8404 CONSTRUCTION.

Road sign plates shall be manufactured from galvanised steel sheet of at least 1.4 mm thickness, or from aluminium alloy sheet of at least 2.5 mm thickness or such other material that is approved by the Engineer. For steel and aluminium plates, in order to deter theft, 10 mm diameter holes at 100 mm spacing shall be drilled through the plates prior to the application of any paint or reflective sheeting. Where there is high risk of theft / vandalism, use approved alternative materials of non-scrap value.
The signs shall be erected at a distance from the edge of shoulder as shown on the Drawings or as directed by the Engineer.

8405 STORAGE AND HANDLING

All road signs or parts of road signs shall be transported and handled so as to prevent any damage and deformation.

8406 ERECTING ROAD SIGN.

a. Position
Road signs shall be erected in compliance with the requirements of the Road Design Manual Volume 6: Traffic Control Facilities and Communication Systems Design - Part 2 - Traffic Signs, and in the positions shown on the Drawings or otherwise indicated by the Engineer.

b. Excavation and Backfilling
Excavations for the erection of road signs shall be made according to the dimensions shown on the Drawings.
Where the excavations are to be backfilled with soil, a 12:1 soil-cement mixture shall be made if required by the Engineer. Where posts or structures are to be fixed in concrete, or where concrete footings are to be cast, the concrete, formwork and reinforcement shall comply with the requirements of SECTIONS 7200, 7300 and 7400. The holes shall be completely filled with concrete up to the level shown on the Drawings or indicated by the Engineer. The upper surface of the concrete shall be neatly finished with sufficient fall to ensure proper drainage.

c. Erection
Road signs shall be erected immediately prior to any use of the road by traffic
Road signs shall be erected as shown on the Drawings or as directed by the Engineer.

f. Time of Erection
Road signs shall be erected immediately prior to any use of the road by traffic.

g. General
All destinations and route numbers shown on the Drawings shall be subject to amendment and confirmation of the details shall be obtained from the Engineer before any particular signs are made. Such amendments may only be available at a late stage in the works programme and the Contractor's programme shall allow for this situation.

8407 PROTECTION AND MAINTENANCE

The Contractor shall protect the completed road signs against damage until they have been accepted by the Employer and shall maintain them until the defects Liability Certificate has been issued. Damage or defects caused by negligence or faulty workmanship shall be rectified by the Contractor at their own cost to the satisfaction of the Engineer.

8408 DISMANTLING, STORING AND RE-ERECTING EXISTING ROAD SIGNS

Where ordered by the Engineer, the Contractor shall dismantle existing road signs, store them, and re-erect them at new positions indicated.
Where required by the Engineer, the signs shall be repainted or repaired and new materials shall be used for part or all of the supporting structure.

SECTION 8500 ROAD MARKING

8501 SCOPE

All road markings shall be of the standard information, regulatory, warning and guidance markings as detailed on the Drawings and in accordance with the RDM Volume 6 Part 1: Road Marking and RDM Volume 6 Part 4: Other Traffic Control Devices.

8502 MATERIALS

The material to be used shall met requirement specified under **Clause 8502** of the standard specification.

8504 MECHANICAL EQUIPMENT FOR APPLICATION OF ROAD MARKING

The equipment shall consist of tools and equipment for cleaning the surfaces, a mechanical road painting machine or automatic self-propelled thermoplastic laying machine as the case may be and all additional hand-operated equipment necessary for completing the work.
The road marking machine shall be capable of applying the road marking at a speed of not less than 5.0 km/hr and it shall be provided with clearly visible amber warning flashing lights that shall always be in operation when the machine is working on the road.

8505 SURFACE PREPARATION

Road markings shall be applied to bituminous and Portland cement concrete surfaces after sufficient time has elapsed to ensure that damage will not be caused to the marking material by volatiles evaporating from the surfacing. In no case shall paint markings be applied until at least 30 days after the completion of Asphalt concrete surfacing and surface dressing to allow for adequate trafficking and embedding of chippings.

8506 SETTING-OUT OF ROAD MARKINGS, ROAD STUDS AND SPEED REDUCING MEASURES

These paint spots shall be at such intervals to ensure that the road markings can be accurately applied and in no case shall they be more than 1.5 m apart. Spots shall be of approximately 10 mm in diameter or otherwise agreed with the Engineer.
The dimensions and positions of road markings shall be as shown on the Drawings or as specified in the appropriate statutory provisions and in accordance with the **Road Design Manual Volume 6, Part 1: Road Marking**. After spotting, the positions of the proposed road markings shall be indicated on the road. These painted pre-markings shall be approved by the Engineer prior to any road marking operations being commenced.

8507 APPLYING THE MARKING MATERIAL.

Before any road-marking machine is used on the permanent Works the satisfactory operation of the machine shall be demonstrated and the application rate checked on a suitable site that is not part of the permanent Works. Any adjustments required to the machine shall be followed by further testing. Only when the machine has been correctly adjusted and the Engineer has approved its use after testing may the machine be used on the permanent work.
Thermoplastic material shall be laid to a thickness of 4 mm ± 0.5 mm or as directed by the Engineer. The method of thickness measurement shall be in accordance with KS EAS

928 part 2.
Edge lines of thermoplastic material shall be broken by a 100 mm gap for every 10 m continuous line.

8508 APPLYING THE RETRO-REFLECTIVE BEADS.

Retro-reflective beads shall be applied by means of a suitable machine in one continuous operation immediately after the paint has been applied The rate of application of the beads shall be 300 – 400 g/m2 of paint or such other rate as the Engineer may direct.

8509 PLACEMENT OF ROAD STUDS

Road studs shall be of the type and size specified in the SUBCLAUSE 8502(c) and shall be fixed in position as shown on the drawings or as directed by the Engineer.
The road studs shall be fixed by means of an appropriate adhesive in accordance with the manufacturer's instructions subject to such amendments to the method as may be required by the Engineer. The studs shall be protected against impact until the adhesive has hardened. Before fixing the road studs, the surface shall be thoroughly cleaned as specified in CLAUSE 8505.

8510 TOLERANCES

The figures, letters, signs, symbols, broken or unbroken lines or other marks shall be marked as shown on the Drawings and in accordance with the **RDM Volume 6 Part 1**: Road Marking or as may be otherwise directed by the Engineer.

Road markings shall be applied to accuracy within the tolerances given below:

a. Width

The width of lines and other markings shall not be less than the specified width, nor shall it exceed the specified width by more than 10 mm. i.e. -0/+10 % on 100 mm width.

b. Position

The position of lines, letters, figures, arrows, retro-reflective road studs and other markings shall not deviate from the true position by more than 100 mm in the longitudinal and 20 mm in the transverse direction.

c. Alignment of markings

The alignment of the edges of longitudinal lines shall not deviate from the true alignment by more than 10 mm in 15 m.

d. Broken lines

The length of segments of broken longitudinal lines shall not deviate by more than 100 mm from the specified length.
The length of segments and the gap between segments in broken lines shall be as indicated on the Drawings. If these lengths are altered by the Engineer the ratio of the lengths of the marked section to the length of the gap between marked sections shall remain the same.
Lines on curves, whether broken or unbroken, shall not consist of chords but shall follow the correct radius

8511 REMOVAL OF TEMPORARY AND REJECTED ROAD MARKINGS

The Contractor shall remove existing obsolete markings from the road surface by means of sand blasting, milling or other approved method. The use of black paint or chemical paint remover to obliterate existing markings will not be permitted except where it is instructed by the Engineer as a temporary measure.
Rejected road markings and paint and marking material that has been splashed or dripped onto the pavement, kerbs, structures or other such surfaces shall be removed by the Contractor at their own cost as approved by the Engineer so that the markings or spilt paint will not be evident to the road user.

8512 PROTECTION

After the road marking material has been applied it shall be protected against damage by traffic or other causes. The Contractor shall be responsible for erecting, placing and removing all warning boards, flags, cones, barricades and other protective measures which may be necessary in terms of any statutory provisions and/or as may be recommended in the **RDM Volume 6 Part 1: Road Marking.**

SECTION 8700 THE ROAD, ROAD RESERVE & TREATING OLD ROADS

8701 SCOPE

This section covers the final finishing and cleaning up of the road and road reserve after construction, and scarifying and treating old roads and temporary deviations.
This section does not cover the finishing which has to be done under **SECTIONS 3100, 3400, 3600** and **SECTION 8600,** nor does it cover the finishing of temporary detours constructed by the Contractor for accommodation of traffic.

8702 FINISHING THE ROADS AND ROAD RESERVE.

After completing the seal or surfacing, or gravel surface on gravel roads, the road and road reserve shall be cleared of all excess earth, stones, boulders, debris and other waste material resulting from the construction of the Works and disposed of in an approved waste site. All finishing and clearing not previously done or completed in accordance with the sections listed in **CLAUSE 8701** above shall be completed. This specification, however, does not intend the finishing, clearing and maintenance which must be done as provided for in other sections of these Specifications to be postponed until the final finishing operations provided for in this section.
Culvert inlets and outlets, culvert barrels, and open drains shall be cleared of all debris, soil, silt and other material. The surfacing shall be cleared of all dirt, mud and foreign objects. Dragging, pushing or scraping material across the finished surfacing shall not be permitted.
All junctions, intersections, islands, kerbing and other elements making up the completed Works shall be neatly finished off.

8703 TREATING OLD ROADS

All old roads, temporary deviations, haul roads and construction roads shall, in so far as is practicable, be levelled with the original ground. Surfaces shall be scarified and broken up to a depth of 150 mm for promoting plant growth. The old roads shall be rehabilitated as shown in the Drawings or as directed by the Engineer and shall be re-vegetated in accordance with **SECTION 8600.**

SERIES 9000 ENVIRONMENTAL, HEALTH, SAFETY & SOCIAL ASPECTS

SECTION 9100 ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL

9101 SCOPE

This section covers the environmental and social protection measures and waste disposal methods to be undertaken by the Contractor for all work on the Contract.

9102 GENERAL

The Contractor shall comply with the Statutory Regulations in force in Kenya regarding environmental protection and waste disposal and shall liaise with the National Environmental Management Authority (NEMA) and other responsible national and local authorities.
The Contractor shall prepare an Environmental and Social Management Plan (ESMP) for

the project and their operations relating to the Environmental and Social Impact Assessment (EISA) studies and the approved Environmental and Social Assessment (ESIA). Environmental and Social Management Plan shall outline the potential environmental hazards and risks and provide an action plan to deal with the hazards, minimise the risks and mitigate adverse environmental impacts, including a general decommissioning plan covering all relevant aspects of the project.

9103 RESPONSIBILITIES FOR ENVIRONMENTAL ISSUES

a. Responsibilities of the Environmental, Health and Safety Supervisor (EHSS)

The Engineer shall on commencement of the project appoint an Environmental, Health and Safety Supervisor who shall have direct responsibility for supervising the implementation and monitoring of the Environmental and Social Management Plan.

The Environmental, Health and Safety Supervisor will be responsible for the practical implementation and monitoring of the Environmental Management Plan and shall report directly to the Engineer in this regard.

b. Responsibilities of the Contractor

The Contractor, their Sub-contractors and employees shall, firstly, try to minimise the impact that may result of the project activities and secondly, adhere to the mitigation measures set down in these specifications to prevent harm and nuisances on local communities and to minimise the negative impacts to the environment.

The contractual obligations of the Contractor and their Sub-Contractors include but not limited to: **i.** Work within the scope of contractual requirements and other tender conditions;

ii. Appoint an Environmental and Social Site Officer (ESSO) and a Health and Safety Officer (HSO); **iii**. Organise representatives of the maintenance/rehabilitation team to participate in the joint site inspections undertaken by the Supervisor.

iv. Carry out any corrective actions instructed by the Engineer.

v. Provide and update information to the EHSS regarding works activities which may contribute, or be continuing to the generation of adverse environmental conditions.

vi. In case of non-compliances/discrepancies, carry out investigation and submit proposals on mitigation measures, and implement remedial measures to reduce environmental impact.

vii. Stop maintenance/rehabilitation activities which generate adverse impacts upon receiving instructions from the Supervisor.

viii. Propose and carry out corrective actions and implement alternative rehabilitation method, if required, in order to minimise the environmental impacts; identifying procedures applicable to the activities they control.

ix. Compiling activity specific method statement to meet the procedures and targets;

x. Submitting activity specific method statements to the EHSS for approval.

xi. Devising a system for monitoring compliance with ESMP Implementation Plan.

xii. Identifying environmental training needs and implementing the environmental awareness training program commissioned by the EHSS.

xiii. Implementing corrective and preventative actions recommended by the EHSS.

xiv. Review of EMP at monthly site meetings on site;

xv. Review of EMP at weekly meetings on site with the EHSS.

xvi. Participating in external audits of the Environmental .and Social Management Plan.

c. Responsibilities of the Environmental and Social Site Officer

An Environmental and Social Site Officer (ESSO) must be appointed by the Contractor and approved by the Engineer; the ESSO will work in conjunction and close liaison with the EHSS and will be in charge of environmental and social issues at the construction site and will give instructions on the implementation of the environmental aspects during all project phases.

The ESSO will be familiar with and monitor and give recommendation on the execution of the Environmental and Social Management Plan (ESMP) and these responsibilities are well illustrated in Sub-clause 9103(c) of the Standard Specifications.

9105 TEMPORARY SOIL EROSION CONTROL.

The temporary erosion control provisions shall be coordinated with permanent erosion control features to assure economical, effective and continuous erosion control throughout the period of the Works and thereafter.
A schedule of proposed temporary (and permanent) soil erosion control Works shall be developed by the Contractor at the commencement of the Contract in consultation with the Engineer and to their satisfaction.
The Works prescribed in this CLAUSE shall not be measured for direct payment, but shall be considered as subsidiary Works, the costs of which will be deemed to be included by the Contractor in their rates in the Bill of Quantities for other Items of work.

9106 PRESERVATION OF TREES AND SHRUBBERY

Preservation of Trees and Shrubbery shall be in accordance to **Clause 9106** of standard specification.

9107 PREVENTION OF WATER POLLUTION.

The Contractor's construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, and other pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution.
The Contractor shall comply with all applicable Kenyan laws, orders, regulations, and water quality standards concerning the control and abatement of water pollution.
Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.

9109 DUST ABATEMENT.

The Contractor shall comply with applicable Kenyan laws, orders, and regulations concerning the prevention, control, and abatement of excessive noise. The Contractor should adopt practical methods including limits on working hours, to minimise construction noise emanating from worksites that are within 100 m of noise sensitive institutions such schools, hospitals and places of worship. Noise meters shall be used to establish appropriate decibel levels for particular activities and acceptable limits set in consultation with those affected, the engineer and a representative of NEMA and/or the local government official responsible.

9110 NOISE ABATEMENT

The Contractor shall comply with applicable Kenyan laws, orders, and regulations concerning the prevention, control, and abatement of excessive noise. The Contractor should adopt practical methods including limits on working hours, to minimise construction noise emanating from worksites that are within 100 m of noise sensitive institutions such schools, hospitals and places of worship.
Workers shall be sufficiently supplied with ear protection and instructed in the use thereof. The Engineer or their representative responsible for Health and Safety on the Work site may instruct the Contractor to provide workers with ear protection if he considers it necessary.

9111 LIGHT ABATEMENT

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

they occur as directed by the Engineer.

9112 PROTECTION OF WILDLIFE

The Contractor shall ensure that the siting of their facilities such as workshops, camps, offices etc. and their activities do not jeopardise movements, eating reproductive habits or in any other way disturb animal life, other than common animals such as insects. The Contactor's staff and workers must not hunt or kill wild animals for game meat at any time unless licensed to do so or have other authority from the relevant Government Authority.

9113 PRESERVATION OF HISTORICAL AND ARCHAEOLOGICAL DATA.

The Contractor shall comply with the requirements of the General Conditions of Contract, or any instruction issued by the Engineer in this regard. Should the Contractor or any of their employees in the performance of this contract discover evidence of possible scientific, historical, prehistoric, or archaeological data he will notify the Engineer immediately giving the location and nature of the findings. Written confirmation shall be forwarded within 2 days. The Contractor shall exercise care so as not to damage artefacts or fossils uncovered during excavation operations and shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Employer.

9115 CLEANUP AND DISPOSAL OF WASTE MATERIALS

The Contractor shall at all times keep the construction area, including storage areas used, free from accumulations of waste materials or rubbish.
Only materials approved by the Engineer may be buried. Burial shall be in pits, the location, size and depth of which shall be approved by the Engineer. The pits shall be covered by at least 0.6 m. of earth material prior to abandonment.

9116 REPORTING ON ENVIRONMENTAL AND SOCIAL MATTERS

The reporting on environmental and social matters shall be in accordance to **CLAUSE 9116**.

9120 EXTERNAL AUDIT AND REPORT.

In order to ensure that the Environmental and Social Management Plan is effectively implemented, it is important that regular external audits are carried out.

9121 NON-CONFORMITIES AND PENALTIES.

The Contractor shall immediately take measures to rectify the problems identified by within the maximum of the grace periods indicated in the Environmental and Social Management Plan or such other time period as the Engineer reasonably will require.

SECTION 9200 OCCUPATIONAL HEALTH & SAFETY, HIV/AIDS & GENDER

9202 GENERAL

The Contractor shall comply with among others the following Statutory Regulations, rules and bylaws with respect to OHS, HIV/AIDS and STI prevention, child protection and Gender equity:
1. **OHS:** The Occupational Safety and Health (Act 2007), the Fatal Accidents Act, the Public Health Act, the Factories and Other Places of Work Act, the Work injury benefits Act, the Trade Union Decree, the Employment Act and other statutory regulations, rules and bylaws that may be enacted from time to time by Government in respect of OHS.

2. **HIV/AIDS:** The HIV and AIDS Prevention and Control Act (2006) and the Employment Act obligates employees against discrimination against those with HIV and AIDS in employment opportunities. Further, the National multi-sectoral AIDS control approach (MAC) and the National Strategic Framework (NSF) for the HIV/AIDS prevention and care, which obligate line Ministries and the private sector to ensure that people living with HIV/AIDS are not discriminated against at the work places.
3. **Child Protection**: The Children Act, No. 29 of 2022 provides the legal basis against, child abuse, child labour, neglect, defilement, inhuman and degrading treatment, rape, gender-based violence, sex with minors and all forms of sexual abuse and harassment.
4. **Gender Equity**: The Employment Act, the National Commission on Gender and Development Act, and National Gender Policy (1997) and the Social Development Sector Strategic Investment Plan (2003) which provide for a legal basis for protecting women and their rights and to ensure affirmative action on the basis of gender. In addition the Act and the various policies provides for legal basis against discrimination in employment on the grounds of race, colour, sex, language, religion, nationality, ethnic or social origin, pregnancy and the like.

9203 OCCUPATIONAL HEALTH AND SAFETY

The Contractor's responsibilities shall, inter alia, include but not limited to the requirements specified in the following SUBCLAUSES 9203(a) to (i):

a. Safe Constructional Plant, Equipment And Methods Of Work

Provision and maintenance of constructional plant, equipment and systems of work that are lighted, safe and without risks to health. This shall include maintaining equipment, engines, and related electrical installations in good working order; maintaining a clean and tidy work space; providing guards and rails, signals and lighting; providing work site rules, safe working procedures and allocating appropriate places to carry out the work.

b. Safe Handling, Storage, Transport And Disposal

Execution of suitable arrangements for ensuring safety and absence of risk to health in connection with the use, handling, storage, transport and disposal of articles and substances. Transportation of any material by the Contractor shall be in suitable vehicles which when loaded does not cause spillage and all loads shall be suitably secured. Any vehicle that does not comply with this requirement or any of the local traffic regulations and laws shall be removed from the Site. The Contractor must ensure that all stores are located such as to reduce risks to the workers on site. Arrangements for the safe use, handling, storage, transport and disposal of articles and substance are to be made before work commences to the satisfaction of the Engineer.

c. Protective Clothing, Equipment etc.

Provision of protective clothing and equipment, first aid stations with such personnel and equipment as are necessary and such information, instruction, training and supervision as are necessary to ensure the health and safety at work of all persons employed on the Works all in accordance with the Laws of Kenya. The Contractor shall provide, at their own expense, protective clothing and safety equipment to all staff and labour engaged on the Works to the satisfaction of the Engineer

9204 HIV/AIDS AND STI PREVENTION

The Contractor's Management Plan for HIV/AIDS and STI shall include details of the measures he proposes to adopt to combat the spread of HIV/AIDS and sexually transmitted Infections (STI) between their staff, labour and the local community. The plan shall also outline workplace policies and programmes for employees living with HIV/AIDS, information and awareness campaigns and effective screening and counselling policies for STI and HIV/AIDS cases of project staff. In any case, the Contractor shall comply with the HIV and AIDS Prevention and Control Act (2006) which prohibits discrimination of persons living with HIV and AIDS.

9205 GENDER

The Contractor's Management Plan for Gender shall be in accordance to **CLAUSE 9205** of standard specification

9206 LABOUR AND WORKING CONDITIONS

The Contractor shall develop and implement written labour management procedures applicable to each project. These procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and International Best Practices.

SECTION 9300 ROAD SAFETY AWARENESS

9302 GENERAL

The Road Safety Awareness Campaign and Training shall be executed by a specialist Sub-contractor on behalf of the Contractor.

9303 ROAD SAFETY AWARENESS CAMPAIGN.

At the commencement of the works, the Contractor will, subject to the Engineer's approval, subcontract the Road Safety Awareness Campaign activities to a registered organisation with proven experience in the provision of Road Safety awareness and training activities. The Contractor, through the sub-contractor, shall implement a road safety campaign amongst their workers for the duration of the contract.
The sub-contractor will be required to implement the road safety awareness campaign, whose activities are well specified in **Sub Clauses 9303** (a) to (i) of the Standard Specifications.

9304 ROAD SAFETY TRAINING

The objective of the road safety campaign is to reduce the risk of exposure to road accidents in the area of the road. The target groups will be the public alongside the road, especially the children in schools and the chiefs of the village, but also local labourers and their supervisors to be employed by the Contractors. The wider community will benefit indirectly through their normal day-to-day interaction with the target groups.
The Contractor will designate a qualified road safety expert with vast experience on Road safety issues, to be approved by the Engineer, who will work closely with the Client, MOR and other implementing agencies to support the road safety campaign activities.
Other Details on Road Safety are well illustrated on Sub Clauses 9304(b) to (c).

SECTION VII- BILLS OF QUANTITIES

1. Objectives

The objectives of the Bill of Quantities are:

a) to provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and

b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and contents of the Bill of Quantities should be as simple and brief as possible.

2. Day work Schedule

A Day work Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Procuring Entity of the realism of rates quoted by the Tenderers, the Day work Schedule should normally comprise the following:

a) A list of the various classes of labor, materials, and Constructional Plant for which basic day work rates or prices are to be inserted by the Tenderer, together with a statement of the conditions under which the Contractor shall be paid for work executed on a day work basis.

b) Nominal quantities for each item of day work, to be priced by each Tenderer at day work rates as Tender. The rate to be entered by the Tenderer against each basic day work item should include the Contractor's profit, overheads, supervision, and other charges.

3. Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary priced Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the Special Conditions of Contract should state the manner in which they shall be used, and under whose authority (usually the Project Manager's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Tenderers in respect of any facilities, amenities, attendance, etc., to be provided by the successful Tenderer as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Tenderer to quote a sum for such amenities, facilities, attendance, etc.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the tendering document. They should not be included in the final tendering document.

4. The Bills of Quantities

The Bills of Quantities should be divided generally into the following sections:

a) Preambles
b) Preliminary items
c) Work Items
c) Day work Schedule;and
d) Provisional items
e) Summary.

Railway Cities Vacant Section					
TOTAL ROAD LENGTH =3.55KMS					
BILL NO. 1. PRELIMINARIES AND GENERAL ITEMS					
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.01	Provide & Maintain Resident Engineer's Main Office as instructed by the Engineer during the duration of the contract.	Lump Sum	1.00		
1.02	Provide and Maintain furniture and equipment for the Engineer's office as specified for the contact period and as detailed in Appendix to Bill Item No.1.02.	Lump Sum	1.00		
1.03	Provide and Maintain Engineer's main Laboratory	Lump Sum	1.00		
1.04	Provide Laboratory equipment and reagents for use by the Engineer's by the Engineer's Representataives and his staff for entire duration of the contract as detailed in Appendix to Bill 1.04	Lump Sum	1.00		
1.05	Allow a provisional sum of Kshs 1,000,000 for Material Testing as directed by the Engineer.	PC sum	1.00	1,000,000.00	
1.06	E.O item 1.05 for Contractor's overheads	%	1,000,000.00		
1.07	Provide and maintain Survey equipments as specified in the contract and as detailed in Appendix to Bill 1.07	Lump Sum	1.00		
1.1	Provide with driver and maintain Two (2) Type II vehicles, minimum 2.8 litre turbocharged 4-wheel drive, twin-cabin pick up vehicles or similar approved by the Engineer, fitted with air bags, mobile telephone hands-free headset and an fm radio for the exclusive use of the Engineer inclusive of the first 4,000 km per vehicle month.	Veh. Months	30.00		
1.11	Extra Over on Item 1.1. inclusive of fuels, maintenance, lubricants and servicing for kilometrage over 4,000 km per vehicle month.	Km	4,000.00		

1.12	Extra Over on Item 1.12 inclusive of fuels, maintenance, lubricants and servicing for kilometrage over 4,000 km per vehicle month.	Km	4,000.00		
1.13	Allow a Provisional Cost of Ksh.4,000,000 for Engineer's Miscelleneous Account to be spent in whole or as parts as instructed by the Engineer and to be reimbersed against receipts.	PC sum	1.00	4,000,000.00	
1.14	Extra Over item 1.14 for Contractor's overheads and profit	%			
1.15	Allow for attendance upon the Engineer by the following staff in accordance with clause 137 of Specific Specification.				-
	(a) Assistant Engineer	Man months	15.00		
	(b) Inpector of works	Man months	30.00		
	(c) Survey assistant	Man months	15.00		
	(d) Laboratory Technologists	Man months	15.00		
	(e) Laboratory Technician	Man months	15.00		
	(f) Environmentalists/Sociologists	Man months	15.00		
	(g) General Clerk	Man months	15.00		
	(h) leveller	Man months	30.00		
	(i) Secretary / Admin	Man months	15.00		
	(j) Chainmen	Man months	30.00		
	(k) General Attendants	Man months	45.00		
	Total		240.00		
1.16	Extra Over item 1.16 for Contractor's overheads and profit		11,550,000.00		
1.17	Allow a Provisional Sum of Ksh 1,000,000 for Engineer's staff mobile phone airtime charges	PC sum	1.00	1,000,000.00	
1.18	Extra Over item 1.20 for Contractor's overheads and profit		1,000,000.00		
1.19	Allow a Provisional Sum of Ksh.480,000 for the office	PC sum	1.00	480,000.00	

	utilities including water and internet.				
1.20	Extra Over item 1.22 for Contractor's overheads and profit	%	480,000.00		
1.21	Provide and install 2 No. Publicity Boards	No.	2.00		
1.22	Allow a Provisional Sum of Ksh 1,800,000 for Payment of overtime allowance of Engineer's Junior staff.	PC sum	1.00	1,800,000.00	
1.23	Extra Over item 1.25 for Contractor's overheads and profit	%	1,800,000.00		
Total of Bill No.1 carried forward to summary page					

BILL NO. 4 : SITE CLEARANCE AND TOP SOIL STRIPPING

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.01	Clear site on road reserve including removal of all growths, bushes,hedges, trees, stumps, grub up roots, and other deleterious materials and back-fill and compact to 100% MDD(AASHTO T99) with approved material as directed by the Engineer.	Ha.	5.86		
4.02	Strip top soil upto 0.2m in thickness along alignment or material sitesincluding removal of all grass and other vegetation,transport to spoil andspread or stock pile for re-use as directed by the Engineer.	m^3	8,594.92		
4.03	Excavate remove & disposal of culverts				
	(a) Culverts Below 600mm	m	180.00		
	(b) Culverts Above 600mm	m	180.00		
4.04	Dismantling of structures on roadway including sorting out the dismantled material, disposal of unserviceable material complete with leads and lifts and utilizing the serviceable material free of cost in permanent works		-		
	(a) Brick masonry	m^3	15.00		
	(b) Stone masonry	m^3	15.00		
	(c) Plain Concrete	m^3	12.00		
	(d) Reinforced Concrete	m^3	40.00		
	(e) Dismantling of pavement	m^3	70.00		

4.05	Cutting of trees of all girth above 300mm including cutting of trunks,branches,uprooting and removal of all material stacking within the RoW and filling depressions/pits by earth etc. complete including liason with concerned authorities for obtaining permissions		~	~	
	(i)girtch 300mm and above	No.	50.00		
	(ii)girtth above 600 mm to 900mm	No.	75.00		
	(ii) girth above 900mm to 1800mm	No.	30.00		
4.06	Allow Prime cost sum of Kshs 5,000,000 for removal and reinstatement of services	PC sum	1.00		
4.07	Extra Over item 4.08 for Contractor's overheads and profit	%	15%		
Bill No. 4 Total Carried Forward to Grand Summary					

BILL NO. 5 : EARTHWORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.01	Fill in soft material including benching of shoulders and embankments and compaction to 100% MDD (AASHTO T99) in layers not exceeding150mm	m^3	568.26		
5.02	Ditto item 5.01 but in hard material	m^3	1,136.52		
5.03	Cut to spoil in soft material	m^3	9,988.93		
5.04	Ditto item 5.03 but in hard material	m^3	2,077.70		
5.05	Cut to spoil in swampy areas	m^3	216.00		
5.06	Provide improved sub grade material to a thickness of 300mm compaction to 100% MDD (AASHTO T99)	m^3	8,204.24		
5.07	Compaction of top 150mm below formation level in cuts to 100% MDD.(AASHTO T99)	m^3	4,794.69		
5.08	Provide and install filter fabric in rock fills	m^2	100.00		
5.09	Provide rockfill(boulders) material and fill to swapy area	m^3	100.00		
Bill No. 5 Total Carried Forward to Grand Summary					

BILL NO. 7 : EXCAVATION AND FILLING FOR STRUCTURES					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
7.01	Excavation in soft material for bridge	m^3	360.00		
7.02	River training in soft material as directed by the Engineer.	m^3	675.00		
7.03	Backfill to structures in soft material.	m^3	800.00		
7.04	As for item 7.03 but in hard material.	m^3	200.00		
7.05	Provide, place and compact rockfill below structures as directed by the Engineer.	m^3	200.00		
7.06	Provide and place porous fill material behind wingwalls and abutment.	m^3	200.00		
7.07	Provide and place gabion boxes(2x1x1m) where instructed by the Engineer.	m^2	100.00		
7.08	Provide and place rockfill to gabions	m^3	100.00		
Bill No. 7 Total Carried Forward to Grand Summary					

BILL NO. 8. CULVERTS AND DRAINAGE WORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	Note: *No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excation material and the cost of such shall be included in the rate of prices*				
8.01	Excavate for inlet,outfall,mitre and catch water drains in soft material	m^3	792.00		
8.02	As per item 8.01, but for hard material	m^3	79.20		
8.03	Provide,lay and joint 300mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access roads	m	50.00		
8.04	Provide,lay and joint 450mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access roads including haunching.	m	10.00		
8.05	Provide,lay and joint 600mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access roads including haunching.	m	200.00		
8.06	As for item 8.03 but 900mm dia concrete pipes (precast to	m	100.00		

	BS 5911 parts 1 & 3)for cross culverts				
8.07	As for item 8.03 but 1200mm dia concrete pipes (precast to BS 5911 parts 1 & 3)for cross culverts	m	60.00		
8.08	Provide and place class 15/20 concrete to beds, surround and haunches	m^3	515.30		
8.09	Provide, place and compact class 25/20 concrete for headwalls, wingwalls, aprons,and toewalls to access and cross pipe culverts including all form work and the provision and placing of reinforcement as shown in the drawings	m^3	71.76		
8.1	Provide,place and compact class 15/20 insitu concrete for use as bed to side drains as instructed by the Engineer	m	370.00		
8.11	Provide and place A142 fabric mesh reinforcement	m^2	550.00		
8.12	Provide and place 200mm thick stone pitching including grouting to outfall drains as detailed in the drawings or as directed by the Engineer	m^2	500.00		
8.13	Provide and place class 25/20 concrete precast concrete for manhole covers as instructed by the Engineer.	No.	50.00		
8.14	Excavate in material, provide and joint 600mm by 355mm pre-cast concrete channels with precast side slabs of 600mm by 225mm by 50mm as linng for storm drain include bedding and backfilling with selected material as directed by the Engineer.	m	-		
8.14	Provide, place and compact class 20/20 concrete for U-drains as per book of drawings, inclusive of formwork and reinforcement.	m^3	1,470.00		
8.15	Provide,place class 25/20 precast concrete for use as drainage cover to side drains as instructed by the Engineer inclusive of formwork an reinforcements	m^3	525.00		

8.16	Excavate in material, provide and joint 600mm by 355mm pre-cast concrete channels with precast side slabs of 600mm by 225mm by 50mm as linng for storm drain include bedding and backfilling with selected material as directed by the Engineer.	m	100.00		
Bill No. 8 Total Carried Forward to Grand Summary					

BILL NO. 9: PASSAGE OF TRAFFIC					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	Note: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included inhe rates inserted herein				
9.01	Allow for the passage of traffic through the works	Lump Sum	1.00		
9.02	Construct and maintain 6 m wide deviation in accordance with the specifications and as directed by the Engineer.	Km	1.00		
Bill No. 9 Total Carried Forward to Grand Summary					

BILL NO. 12: NATURAL MATERIAL FOR SUB-BASE ON FOOTPATHS					
12.01	Provide, spread, water, process and compact 150 mm thick natural gravel for footpath.	m^3	2,450.62		
TOTAL BILL NO. 12 Total Carried Forward to Summary					

BILL NO. 13. GRADED CRUSHED STONES OR HAND PACKED STONE FOR BASE					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE**	**AMOUNT**
	Note: *No overhaul will be paid for these items as they shall be deemed to have been included in the Contractor's rates.*				
13.01	Provide, spread, water and compact Graded Crushed Stone in SUB-BASE to specified thickness at 95% MDD with CBR 30% minimum and PI 15% maximum in main carriageway,junctions, accesses, bus bays and shoulders.	m^3	4568.27		

13.02	Provide, place, process and compact Hand Packed stone for sub base as per the Engineer's Specifications	m^3	320.00		
TOTAL BILL NO. 13 Total Carried Forward to Summary					

BILL NO. 14 : CEMENT OR LIME TREATED SUBBASE AND BASE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Note: No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates	-	-	-	-
14.01	Provide and spread cement as an improvement agent for sub-base and base	Tonne	182.73		
14.02	Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified	m^3	4,568.27		
14.03	Curing of cement treated base layer	m^2	26,104.41		
Bill No. 14 Total Carried Forward to Grand Summary					

BILL NO. 15: BITUMINOUS SURFACE TREATENTS AND SURFACE DRESSING

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15.01	Provide and spray MC 30 cutback bitumen to prime gravel and GCS on road carriageway	Litres	30,082.23		
15.02	Provide and spray K1-60 bitumen emulsion tack coat at a rate of 0.3-0.8 l/m2 GCS on primed gravel and GCS	Litres	60,164.46		
Bill No. 15 Total Carried Forward to Grand Summary					

BILL NO. 16: BITUMINOUS MIXES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
16.01	Prepare surface of underlying material, provide, lay and compact DBM (0/30) as base layer in compacted thickness as specified using approximately 4.5% nominal bitumen content by weight of total mix (100mm)	m^3	2,486.40		
16.02	Provide place compact AC Type I with maximum aggragate size of 20mm as	m^3	1,305.22		

	base as directed by the Engineer.				
Bill No. 16 Total Carried Forward to Grand Summary					

BILL NO. 17:CONCRETE WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
17.01	Class 15/20 for blinding.	m^3	6.00		
17.02	Class 30/20 concrete for superstructure elements.	m^3	25.00		
	FORMWORK				
	Provide, erect and afterwards dismantle and remove all the formwork as specified by the Engineer.				
17.03	Vertical formwork class F1 finish.	m^2	98.00		
17.04	As item 17.04 but class F3 finish	m^2	75.00		
17.05	Horizontal formwork class F2 finish.	m^2	68.00		
	REINFORCEMENT				
	Provide, bend and fix into positions high yield steel reinforcement bars as directed by the Engineer or as shown on the drawings.				
17.06	Reinforcement bars of high yield strength to BS 4461, size 16mm and above.	Tonne	4.00		
17.07	Reinforcement bars of high yield strength to BS 4461, size 12mm and below.	Tonne	3.00		
17.08	Class 25/20 concrete for bridge handrail including reinforcement	m^3	10.00		
Bill No. 17 Total Carried Forward to Grand Summary					

BILL No. 20: ROAD FURNITURE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Road Marking and Road Signs				
	Road Marking				

	Provide and lay hot applied thermoplastic road marking compound in approved colour and shade (ASTM 9) for road marking on bituminous surface on centerline, 100 mm, edge line 150 mm wide 3.0 mm thick, using fully automatic extrusion machine and using pre-melter for melting thermoplastic material including cleaning the surface of all dirt, dust, and other foreign matter, complete with demarcation at site/pre-marking, finishing and managing the traffic movements. Marking to be done as per the specifications, detailed drawings and as instructed by the Engineer.				
20.01	(i) For lane markings (broken lines) with white paint, 100 mm wide	m^2	355.00		
20.02	(iii) For edge lines (continuous line) with white paint, 150 mm wide	m^2	710.00		
20.03	Providing and applying two coats of synthetic enamel paint including primer to kerbs as per the Technical Specifications and as instructed by the Engineer.	m	710.00		
	Permanent Road Signs		-		
20.04	Supply and fix regulatory/mandatory road sign boards made up with high intensity grade retro-reflective type sheeting(ASTM 9) complete as per the drawings and Technical specifications.	No.	1.00		
20.05	Supply and fix cautionary/warning road sign boards made up with high intensity grade retro-reflective type sheeting (ASTM 9) complete as per the drawings and Technical Specifications	No.	1.00		
20.06	Supply and fix informatory road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications.		-		
	(i) Area less than 1.0 m^2	No.	1.00		

	(ii) Area more than 1.0 m^2 but less than 2 m^2	No.			
	(iii) Area more than 2.0 m^2 but less than 5 m^2	No.			
20.07	Supply and fix in position road overhead retro-reflective informatory sign boards including fixing on overhead gantry/any other overhead structure excluding the cost of gantry and other supports but including cost of back frame complete as per the drawings and specifications.		-		
	(i) For 12.5 m span	No.	2.00		
	(i) For 20.0 m span	No.	1.00		
	Other Road Furniture		-		
20.08	Provide and lay cement concrete kerb and channel for central reserve, footpaths and traffic islands in concrete Class 25/20 as per the drawings and as instructed by the Engineer complete with all leads and lifts. Pre-cast/cast-in-situ kerb / divider		-		
	(i) Barrier type	m	6,390.00		
	(ii) Mountable type	m	500.00		
20.09	Erect standard bumps and rumble strips using Type 1 AC as per drawing where instructed by the Engineer.	m^3	50.00		
20.1	Provide and place gauge 16 steel pipe bollards of diameter 168mm and 1.0m above the ground, embedded to a depth of 0.5m at place painted and fitted and reflectorized as shown on the drawing and as directed by the Engineer. Rate to include foundation base and filling pipe with concrete minimum class 15/20	No.	-		
20.11	Provide and fix aluminium casted reflective studs (Cat's eyes) of size 100 mm x 100 mm at the base with zinc coated nails of size 12 mm dia. of 120 mm long having both side (dual direction) high impact ABC 3 № of eyes of 16 mm dia on both side containing 7 beads each, a	No.	356.00		

	total of 42 beads in retro reflective.				
20.12	Allow a prime cost sum of Kshs 17,000,000 for provision of Smart Solar streetlighting.	PC Sum	1.00	17,000,000	
20.13	Extra Over item 20.18 for Contractor Overheads and profit		15%		
20.14	Allow a prime cost sum of Kshs 50,000,000 for ITS equipment	PC Sum	1.00	50,000,000	
20.15	Extra Over item 20.16 for Contractor Overheads and profit	%	15%		
BILL 20 Total Carried Forward to Grand Summary					

BILL No. 21:MISCELLANEOUS BRIDGE WORKS

Item	Description	Unit	Qty	Rate	Amount
21.01	Provide and apply bituminous waterproof to abutments and wingwalls in two layers at a rate of 0.55L/m2 as shown in the drawings or as directed by the Engineer.	m^2	131.00		
21.02	Provide and place as directed by the Engineer P.V.C. pipes of diameter 50mm to form weep holes in abutment and wingwalls.	m	94.00		
21.03	Provide and place handrails to bridge deck including steel post, anchors and welding as directed by the Engineer.	m	60.00		
BILL 21 Total Carried Forward to Grand Summary					

BILL No. 22: DAY WORKS					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
	Note: *Any plant employed upon Day works which have power rating lower than that specified, shall be paid for at rates lower than those in the Schedule of Day works. The reduction in the payable rate shall be in proportion to the power rating below that specified.*				
22.01	Crawler Dozer with Hydraulic Ripper				
	(a) 100-135 Kw rated flywheel power	hr	10.00		

	(b) 136-185 Kw rated flywheel power	hr	5.00		
	(c) 186-250 Kw rated flywheel power	hr	5.00		
22.02	Motorized rubber tyred single engine scrapers				
	(a) Up to 16m³ heaped capacity	hr	5.00		
	(b) 17-26 m³ heaped capacity	hr	5.00		
22.03	Motorized rubber tyred twin engine scrapers				
	(a) Up to 16 m³ heaped capacity	hr	5.00		
	(b) 17-26 m³ heaped capacity	hr	5.00		
22.04	Motor Graders with Hydraulic Ripper or Scarifier				
	(a) 80-110 Kw rated flywheel power	hr	5.00		
	(b) 111-120 Kw rated flywheel power	hr	8.00		
	(c) 121-160 Kw rated flywheel power	hr	5.00		
22.05	Tracked Excavator Cranes				
	(a) 20-28t max working load	hr	5.00		
	(b) 28.1-36.1t max working load	hr	5.00		
	(c) 36.1-56t max working load	hr	5.00		
22.06	Excavators hydraulic wheeled dual purpose				
	(a)0.6-0.8m³ rated bucket capacity	hr	5.00		
	(b)0.81-1.0m³ rated bucket capacity	hr	8.00		
22.07	Wheeled loaders 4X4 articulated				
	(a) 1.5-2.0 m³ SAE rated capacity	hr	5.00		
	(b) 2.01-3m³ SAE rated capacity	hr	5.00		
	(c) 3-5 m³ SAE rated capacity	hr	5.00		
22.08	Crawler Loaders with Hydraulic Ripper				
	(a) 0.8-1.3m³ SAE rated capacity	hr	5.00		
	(b) 1.31-1.99 m³ SAE rated capacity	hr	5.00		
	(c) 2-2.5 m³ SAE rated capacity	hr	5.00		
22.09	Rollers Towed vibratory including tractor				
	(a) 6.5-8.8 t un-ballasted weight	hr	5.00		

	(b) 8.6-11.7 t un-ballasted weight	hr	5.00		
22.1	Road Roller deadweight (Steel Three Wheel)				
	(a) 6.5 -8.8 t un-ballasted weight	hr	5.00		
	(b) 8.6-11.7 t un-ballasted weight	hr	5.00		
22.11	Roller rubber tyred self propelled				
	(a) up to 1 t per wheel	hr	5.00		
	(b) 1.1 t -2.0 t per wheel	hr	5.00		
BILL 22 Sub-Total Carried to next page					
	Sub - total brought forward from previous page				
Item	Description	Unit	Qty	Rate	Amount
22.12	Roller Vibratory single roll Rubber tyred, 8.3-10.5 t un-ballasted weight	hr	8.00		
22.13	Vibrating plate compactor 114-200 kg operating weight	hr	6.00		
22.14	Compressor rated by normal delivery of free air per minute complete with all tools				
	(a) 6.0-7.4 m^3/mm	hr	5.00		
	(b)7.5-9.7m^3/min	hr	5.00		
	(c) 9.8-25.5m^3/min	hr	5.00		
22.15	Mobile rubber tyred rough terrain crane 23-40 t max working load	hr	5.00		
22.16	Small dumpers 751kg-1.2t max rated payload	hr	5.00		
22.17	Pumps(Inclusive of all hoses				
	(a) 50-76mm delivery	hr	5.00		
	(b) 77-101mm delivery	hr	5.00		
22.18	Rubber tyred tractors including trailer. 50-70kw rated flywheel power	hr	5.00		
22.19	Concrete mixers (wet capacity)				
	(a) up to 100 litres	hr	5.00		
	(b) 101-200 litres	hr	5.00		
	(c) 201-300 litres	hr	5.00		
22.20	Transit Mixer 4.5 m^3/hour	hr	5.00		
22.21	Concrete pump of 45 and 30 m^3 capacity	hr	5.00		
22.22	Concrete poker vibrator	hr	5.00		
22.23	Concrete pump of 45 and 30 m^3 capacity	hr	5.00		
22.24	Lorries - Flatbed				

	(a) up to 7.5t gross vehicle weight	hr	5.00		
	(b) 7.6-12.0t gross vehicle weight	hr	5.00		
22.25	Lorries - Tippers				
	(a) up to 11t gross vehicle weight	hr	5.00		
	(b) 11-17t gross vehicle weight	hr	5.00		
	(c) 17.1- 25t gross vehicle weight	hr	10.00		
22.26	Van, Pickup or similar utility vehicle				
	(a) up to 1 t carrying capacity	hr	5.00		
	(b) 1.1-2.6 t carrying capacity	hr	5.00		
22.27	Self propelled water or fuel tanker				
	(a) 3500-4550 litre capacity	hr	5.00		
	(b) 4551-7000 litre capacity	hr	5.00		
	(c) 7001-12000 litre capacity	hr	5.00		
22.28	Bitumen pressure distributor				
	(a) 3500-4550 litre capacity	hr	6.00		
	(b) 4551-9000 litre capacity	hr	5.00		
22.29	Hot mix plant - 60 tonnes per hour	hr	5.00		
22.3	Wet mix plant - 60 tonnes per hour	hr	5.00		
22.31	Hydrostatic paver & finisher with sensor control	hr	5.00		
22.32	Batching and mixing plant 15-20 m^3 capacity	hr	5.00		
22.33	Concrete paver finisher with 40 HP motor	hr	5.00		
22.34	Chip spreader	hr	5.00		
22.35	Mechanical broom	hr	5.00		
	Sub - total brought forward from previous page				
22.36	Kerb making machine	hr	5.00		
22.37	Road marking machine	hr	5.00		
22.38	Electric generator				
	(a) 100 KVA	hr	5.00		
	(b) 125 KVA	hr	5.00		
22.39	Crusher Plant	hr	5.00		
22.4	Pulvimixer	hr	5.00		
22.41	LABOUR				
	(a) Unskilled Labour	hr	5.00		
	(b) Skilled Labour	hr	5.00		
	(c) Artisan	hr	5.00		
	(d) Plant Operator	hr	15.00		

	(e) Driver	hr	15.00		
	(f) Foreman	hr	15.00		
	(g) Office attendants and chainmen	hr	5.00		
	MATERIALS				
	All items of materials must be priced to comply with the Specifications.				
22.42	Ordinary Portland Cement	Tonne	2.00		
22.43	Hydrated Lime	Tonne	2.00		
22.44	Mild Steel				
	(a) Up to and including 16 mm diameter	Tonne	2.00		
	(b) Over 16 mm diameter	Tonne	2.00		
22.45	High Yield Steel				
	(a) Up to and including 16mm diameter	Tonne	2.00		
	(b) Over 16mm diameter	Tonne	2.00		
22.46	Aggregates for Concrete				
	(a) Fine	m^3	15.00		
	(b) coarse	m^3	15.00		
22.47	Shuttering Timber				
	(a) F1 finish	m^2	10.00		
	(b) F2 finish	m^2	20.00		
	(b) F3 finish	m^3	15.00		
22.48	Cutback Bitumen and emulsion				
	(a) 80/100 penetration grade bitumen	Litre	15.00		
	(b) MC 3000 cut-back bitumen	Litre	15.00		
	(c) MC 70 cut-back bitumen	Litre	15.00		
	(d) K-160 bitumen emulsion	Litre	15.00		
22.49	Gabion mesh, size 1.0 m x 1.0 m x1.0 m	m^2	5.00		
22.5	Stone for gabions	m^3	5.00		
BILL 22 Total Carried Forward to Grand Summary					

BILL NO. 23: CONCRETE PAVING BLOCKS					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**

23.01	Provide and fix on the footpaths interlocking concrete paved unishaped blocks (monolithic single layer precast concrete blocks) of any specified colour/size & shape, with approved pattern of 60 mm thick having average crushing strength of 50 N/mm² on average thickness of 40 mm uniformly graded river sand cushioning properly compacted with a mechanical compactor to required level, grade and camber as per the drawings	m²	7,104.00		
BILL NO. 23 Total Carried Forward to Grand Summary					

BILL NO. 25: ENVIRONMENTAL MITIGATION MEASURES,HIV/AIDS CAMPAIGN AND ROAD SAFETY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
25.01	Allow a Prime Cost sum of Kshs. 320,000 for monitoring of Environmental Mitigation Measures as directed by the Engineer.	PC Sum	1.00	320,000.00	
25.02	E.O. item 25.01 for Contractor's overheads and profits.	%	320,000.00		
25.03	Allow a Prime Cost Sum of 1,000,000 for NEMA Licence	PC Sum	1.00	1,000,000.00	
25.04	E.O. item 25.03 for Contractor's overheads and profits.	%	1,000,000.00		
25.05	Allow a Prime Cost sum of Kshs. 1,000,000 for Landscaping as directed by the Engineer.	PC Sum	1.00	1,000,000.00	
25.06	E.O. item 25.05 for Contractor's overheads and profits.	%	1,000,000.00		
25.07	Allow a Provisional sum of Kshs.1,000,000.00 for pre-construction, construction and post-construction road safety audit	PC Sum	1.00	1,000,000.00	
25.08	E.O. item 25.07 for Contractor's overheads and profits.	%	1,000,000.00		
25.09	Allow a provisional sum of Ksh.3,000,000.00 for training of Engineer's staff as stipulated in clause 145 of special specification.	PC Sum	1.00	3,000,000.00	

25.10	E.O. item 25.09 for Contractor's overheads and profits.	%	3,000,000.00		
25.11	Implement HIV/AIDS awareness campaign amongst the workers for the duration of the contract	Months	15.00		
25.12	Allow for the availability of condoms to workers and staff for the duration of the contract	Months	15.00		
25.13	Allow for the engagement of specialist HIV/AIDS sub-contractor to deal with prevention and awareness activities as per program to be approved by the R.E.	Months	15.00		
25.14	Allow for preparation and submission of Monthly reports on HIV/AIDs awareness and prevention activities. Reports to be tabled at site meetings	Months	15.00		
Bill No. 25 Total Carried Forward to Grand Summary					

APPENDIX TO BILL ITEM № 1.02: ENGINEER'S OFFICE FURNITURE & EQUIPMENT					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
102	1.0 FURNITURE AND EQUIPMENT FOR THE ENGINEER'S OFFICE				
1.02/1	AO size drawing board on adjustable metal stand with parallel sliding cursor	№	3		
1.02/8	Set of drawing pens (Rotring Micron or similar approved)	№	1		
1.02/12	Provide and maintain three (3) approved branded laptop computers with the following: Intel Core i9 processor, 16" LED display, 1TB SATA SSD Storage, 8 GB DDR RAM, DVD ±RW multi-layer drive, NIC card, 540M graphics card complete with all accessories and pre-loaded with licensed Windows 10 Ultimate 64-bit OS, latest MS Office and MS Project. The PC should have full multimedia capabilities.	№	3		
1.02/13	As for 104/13 but similar approved branded two (2) Desktop Computer with 20" TFT screen.	№	2		
1.02/14	Provide and maintain Konica Minolta bizhub 220 or simlar multifunctional colour/print system	№	1		
1.02/15	Provide and maintain Konica Minolta pagepro 1490 MF or similar approved desktop laser printer	№	4		
1.02/17	Electronic Scientific Calculator 12 figures (Casio fx-95 ES PLUS)	№	4		
1.02/18	Document binding machine	№	1		
1.02/19	Assorted diameter 21 Ring A4 Plastic Binding Combs	№	5		
1.02/20	Reams of A4 photocopying paper	№	50		
1.02/21	Reams of A3 photocopying paper	№	10		
1.02/22	Provide and maintain HP DesignJet T830 36in Multifunction Printer or similar approved Large formart printer	№	1		
1.02/23	Stapling machine Ofrex size 66 or similar with 5000 staples	№	3		
1.02/25	Stapling machine Ofrex size 50 or similar with 5000 staples	№	6		
1.02/26	Pencil sharpener (desk mounted type)	№	2		
1.02/27	Heavy duty paper punch	№	1		
1.02/28	Ordinary paper punch	№	6		

1.02/29	Filling tray	№	12		
1.02/30	First aid kit	№	3		
1.02/31	Fire extinguisher	№	4		
1.02/32	Waste paper basket	№	12		
1.02/33	Refrigerator min. capacity 0.285m^3	№	1		
1.02/35	900-watt 25 litre microwave oven with grill	№	1		
1.02/36	Air conditioner unit, medium size	№	2		
	2.0 OFFICE FURNITURE				
1.02/37	Cupboard 0.15 m^3, lockable	№	6		
1.02/38	Cooker 2 plate electric	№	1		
1.02/39	Desk 2.2 x 0.9m with lock up drawers	№	6		
1.02/40	Swivel chair with arms	№	6		
1.02/41	Chairs (standard)	№	12		
1.02/42	Drawing table stools	№	1		
1.02/43	Typist's desk	№	1		
1.02/44	Typist's chair	№	2		
1.02/45	Stationery cupboard, 1.2m^3 lockable	№	2		
1.02/46	Steel filing cabinet 4 drawers, lockable	№	1		
1.02/47	Bookshelf, 3 shelves 1.5m long hold box files	№	2		
1.02/48	Office table (2 m x 1.2 m) each with 2 chairs	№	6		
1.02/49	Portable table top electric fan	№	2		
1.02/50	Standard electric fan	№	2		
1.02/51	Conference table for 12 persons	№	1		
1.02/52	Chairs for conference table	№	12		
1.02/53	3m long bench with cushioned seat and back rest	№	1		
Total carried forward to Bill 1.02					

APPENDIX 1.04 TO BILL ITEM 1.04 FURNITURE, EQUIPMENT AND REAGENTS FOR THE ENGINEER'S LABORATORY					
BILL ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2. General Equipment					
1.04/2.03	Compaction mould complete with base plate and extension collar, 101.6 mm dia x116.43 mm high	No	2		
1.04/2.04	2.49kg. Compaction hammer, drop regulated to 304.8mm	No	1		
1.04/2.05	4.535kg compaction hammer, drop regulated to 457.2mm	No	1		
1.04/2.06	Electric vibrating Kango Hammer fitted with steel tamper (BS1377) with support frame	No	1		
1.04/2.07	Straight edge 300 mm long with handles	No	2		

1.04/2.08	Steel Tamper (BS1377) compatible with Kango hammer	No	2		
1.04/2.09	Compaction mould 152.4 mm. dia x 116.43 mm complete with base plate and extension collar, 101.6 mm	No	2		
1.04/2.10	Galvanized metal tray 1m x 0.5m x 75mm deep	No	4		
1.04/2.11	75mm brush	No	4		
1.04/2.12	Semi-automatic balance, 25kg Capacity accurate to 1g, including weights	No	1		
1.04/2.13	20mm BS Sieve, 300mm diameter	No	1		
1.04/2.14	Stop Clock	No	2		
1.04/2.15	Thermostatically controlled electric oven 105-1100C, capacity 0.225 m^3	No	1		
1.04/2.17	Cone penetrometer with gauge and automatically controlled test cup	No	1		
	3. Density (Sand replacement method BS 1377)				
1.04/3.02	Stainless steel tray 305mm diameter	No	4		
1.04/3.04	Metal tray with 200mm diameter hole in the centre, 500mm x 500mm square, 50 mm deep	No	1		
1.04/3.05	Steel pegs for fixing tray in position	No	20		
1.04/3.07	Sand pouring cylinder, 215 mm diameter	No	1		
1.04/3.08	Cold steel chisel 20mm x 300mmm	No	4		
1.04/3.09	Cold steel chisel 10mm x 250mmm	No	4		
1.04/3.10	1.5kg hammer	No	2		
1.04/3.11	Scoop for removing excavated material from hole, 250 mm long handle	No	2		
1.04/3.12	100mm brush, soft	No	3		
1.04/3.13	50mm brush, soft	No	3		
1.04/3.14	Primus gas stove	No	2		
1.04/3.16	Ditto but 200 mm diameter x 250 mm deep	No	1		
	8. Sieve Analysis (BS 1377)				
1.04/6.12	BS Sieve 300mm diameter in sizes 75, 63, 50, 37.5, 28, 20, 14,10, 6.3, 5 and 4 mm, plus lid and receiver	Set	1		
1.04/6.13	BS Sieve 200mm diameter in sizes 2, 1, 0.6, 0.5, 0.425,0.300,0.150 and 0.075 mm, plus lid and receiver	Set	1		
1.04/6.15	BS sieve 200mm diameter 0.425 and 0.075 mm	set	1		

1.04/6.16	1 m x 1 m x 75mm deep galvanized metal tray	No	5		
1.04/6.17	Riffle box with 50mm slots (BS 1377)	No	1		
	9. Miscellaneous Equipment				
1.04/9.05	Metal scoop, large (150mm wide)	No	4		
1.04/9.06	Metal scoop, medium (100mm wide)	No	4		
1.04/9.07	Garden trowel	No	3		
1.04/9.09	3.5 kg hammer	No	1		
1.04/9.10	7kg hammer	No	1		
1.04/9.11	Rubber mallet (1kg)	No	1		
1.04/9.15	500mm x 500mm x 10mm plate glass (BS 1377)	No	2		
1.04/9.26	BS Sieve brush	No	2		
1.04/9.27	Measuring cylinder set, 25 ml, 100 ml, 500 ml, 1000 ml, 2000ml	set	2		
1.04/9.36	Vernier calipers, 150mm	No	2		
1.04/9.38	Pestle and mortar	No	2		
1.04/9.39	Linear shrinkage mould (BS 1377)	No	6		
1.04/9.40	Liquid Limit Device	No	1		
1.04/9.45	Polythene wash bottle (500 ml)	No	4		
1.04/9.48	Maximum and minimum thermometer (BS692)	No	1		
1.04/9.49	Rain gauge	No	1		
	11. Concrete: Slump and Cube Manufacture (BS 1881)				
1.04/11.01	Slump cone, tamping rod and base	Set	1		
1.04/11.02	Concrete cube mould, 150mm cube	No	1		
1.04/11.04	Soaking tank for cubes (capacity 50 No.)	No	1		
1.04/11.04	Cube tamping bars	No	1		
Total carried forward to Bill 1.04					

APPENDIX TO BILL ITEM 1.07 - PROVIDE AND MAINTAIN SURVEY EQUIPMENT

Bill No.	Survey Equipment	Quantity	Rate	Amount
1.07/1.01	Digital Level Machine, with all its supporting accessories, that meets the requirements as indicated in the special specifications	1		
1.07/1.02	Digital Levelling staff 5m with Levelling bubble	2		
1.07/1.03	Scientific calculator	2		
1.07/1.05	Robotic Total Station	1		
1.07/1.06	Two-way Radio walkie Talkie	4		
1.07/1.07	Lasor Distance Measuring Equipment (200m range)	3		
1.07/1.08	Steel Tape (100m, 50m)	2		
Total carried forward to Bill 1.07				

GRAND SUMMARY OF BILL OF QUANTITIES		
BILL ITEM	**DESCRIPTION**	**AMOUNT(KShs)**
1	Preliminaries and General Items	
4	Site Clearance and Top Soil Stripping	
5	Earthworks	
7	Excavation and Filling for Structures	
8	Culverts and Drainage Works	
9	Passage to Traffic	
12	Natural Material for Subase on Footpath	
13	Graded Crushed Stones of Hand Packed Stone for Base	
14	Cement or Lime Treated Subbase and Base	
15	Bituminous Surface Treatment and Surface Dressing	
16	Bituminous Mixes	
17	Concrete Works	
20	Road Furniture	
21	Miscellaneous Bridge Works	
22	Day Works	
23	Concrete Paving Blocks	
25	Environmental mitigation measures,HIV/AIDS campaign and Road Safety	
(A)	SUB-TOTAL (1)	
(B)	Add 2.5% VARIATION OF PRICE of sub total (1)	
(C)	Add 2.5% CONTIGENCIES of sub total (1)	
(D)	SUB-TOTAL (2)=(A+B+C)	
(E)	Add …16% VAT of sub-total (2)	
TOTAL (D+E)		

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PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VIII - GENERAL CONDITIONS OF CONTRACT

These General Conditions of Contract (GCC), read in conjunction with FIDIC Conditions of Contract 1999, the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

General Conditions of Contract

A. General

1. Definitions

1.1 Bold face type is used to identify defined terms.

a) **The Accepted Contract** Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.

c) **The Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.

d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.

e) **Compensation Events** are those defined in GCC Clause 42 hereunder.

f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.

g) **The Contract** is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.

h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.

i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.

j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.

k) **Days** are calendar days; months are calendar months.

l) **Day work**s are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

m) **A Defect** is any part of the Works not completed in accordance with the Contract.

n) **The Defects** Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Contractor.

o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.

p) **Drawings** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

q) **The Procuring Entity** is the party who employs the Contractor to carry out the Works, **as specified in the SCC,** who is also the Procuring Entity.

r) **Equipmen**t is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

s) **"In writing" or "written"** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.

u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.

w) **Plant i**s any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.

y) **SCC** means Special Conditions of Contract.

z) **The Site** is the area of the works as **defined as such in the SCC**.

aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

ff) **A Variation** is an instruction given by the Project Manager which varies the Works.

gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

2. Interpretation

2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.

2.2 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

a) Agreement,
b) Letter of Acceptance,
c) Contractor's Bid,
d) Special Conditions of Contract,
e) General Conditions of Contract, including Appendices,
f) Specifications,
g) Drawings,
h) Bill of Quantities, and
i) any other document **listed in the SCC** as forming part of the Contract.

3. Language and Law

3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.

3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when

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

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

4. Project Manager's Decisions

4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.

5. Delegation

5.1 Otherwise **specified in the SCC,** the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as **referred to in the SCC.** The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

9. Personnel and Equipment

9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

9.3 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

10. Procuring Entity's and Contractor's Risks

10.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Procuring Entity's Risks

11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:

a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to

i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or

ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.

b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to

aa) a Defect which existed on the Completion Date,

bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or

cc) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Procuring Entity's risks are Contractor's risks.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

a) loss of or damage to the Works, Plant, and Materials;

b) loss of or damage to Equipment;

c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and

d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Data

14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works

15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager

17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety

18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site

20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC,** the Procuring Entity shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site

21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions, Inspections and Audits

22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.

22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Procuring Entity and/or persons appointed by the Public Procurement Regulatory Authority to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract

termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

23. Appointment of the Adjudicator

23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.

23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

24. Settlement of Claims and Disputes

24.1 Contractor's Claims

24.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Project Manager, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.

24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.

24.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Procuring Entity's liability, the Project Manager may, after receiving any notice under this Sub-Clause, monitor the record- keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.

24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

a) this fully detailed claim shall be considered as interim;
b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Project Manager may reasonably require; and
c) the Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Project Manager.

24.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Project Manager shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause

24.1.8 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

24.1.9 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

24.1.10 If the Project Manager does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 24.3.

242 Amicable Settlement

24.2.1 Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

243 Matters that may be referred to arbitration

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

a) The appointment of a replacement Project Manager upon the said person ceasing to act.
b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
e) Any dispute arising in respect of war risks or war damage.
f) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

244 Arbitration

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.

24.4.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

24.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

24.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

24.4.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open

up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.

24.4.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

24.4.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.

24.4.9 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

24.5 Arbitration with National Contractors

24.5.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

i) Architectural Association of Kenya
ii) Institute of Quantity Surveyors of Kenya
iii) Association of Consulting Engineers of Kenya
iv) Chartered Institute of Arbitrators (Kenya Branch)
v) Institution of Engineers of Kenya

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

24.6 Alternative Arbitration Proceedings

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

24.7 Failure to Comply with Arbitrator's Decision

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

24.7.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

24.8 Contract operations to continue

24.8.1 Notwithstanding any reference to arbitration herein,

a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
b) the Procuring Entity shall pay the Contractor any monies due the Contractor.

25. Fraud and Corruption

25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.

25.2 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or

execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

B. Time Control

26. Program

26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

26.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

28.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.

28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

29. Delays Ordered by the Project Manager

29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties

for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

32. Identifying Defects

32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

33. Tests

33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

35. Uncorrected Defects

35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

36. Contract Price[7]

36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

37. Changes in the Contract Price[8]

37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.

37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

38. Variations

38.1 All Variations shall be included in updated Programs9 produced by the Contractor.

38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

[7]*In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:*

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

[8]*In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:*

The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

In lump sum contracts, add "and Activity Schedules" after "Programs." In lump sum contracts, delete this paragraph.

38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning

38.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work

38.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

a) the proposed change(s), and a description of the difference to the existing contract requirements;
b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
c) a description of any effect(s) of the change on performance/functionality.

38.8 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:

a) accelerate the contract completion period; or
b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
c) improve the quality, efficiency, safety or sustainability of the Facilities; or
d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.

38.9 If the value engineering proposal is approved by the Procuring Entity and results in:

a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or

b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in
(a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

39.1 When the Program, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Project Manager.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed.

40.5 The value of work executed shall include the valuation of Variations and Compensation Events.

40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

40.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: *(corrected tender price – tender price)/tender price X 100*.

41. Payments

41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 90 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

42.1 The following shall be Compensation Events:

d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.

e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the

work of the Contractor under the Contract.

f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.

g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.

h) The Project Manager unreasonably does not approve a subcontract to be let.

i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.

j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.

k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

l) The advance payment is delayed.

m) The effects on the Contractor of any of the Procuring Entity's Risks.

n) The Project Manager unreasonably delays issuing a Certificate of Completion.

422 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

423 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

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[11] *In lump sum contracts, add "or Activity Schedule" after "Program."*

[12] *In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."*

42.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

43. Tax

43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currency of Payment

44.1 All payments under the contract shall be made in Kenya Shillings

45. Price Adjustment

45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC.** If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B\ Im/Io$$

where: P is the adjustment factor for the portion of the Contract Price payable.

A and B are coefficients[13] **specified in the SCC,** representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and Im is the index prevailing at the end of the month being invoiced and IOC is the index prevailing 30 days before Bid opening for inputs payable.

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention

46.1 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

49. Advance Payment

49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the **SCC** by the date stated in the **SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC,** by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Day works

51.1 If applicable, the Day works rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Day works shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

51.3 The Contractor shall be paid for Day works subject to obtaining signed Day works forms.

52. Cost of Repairs

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

54. Taking Over

54.1 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

55. Final Account

55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

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[13] *The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the non-adjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other non-adjustable components. The sum of the adjustments for each currency are added to the Contract Price.*

56. Operating and Maintenance Manuals

56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

57. Termination

57.1 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
d) a payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;
e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
f) the Contractor does not maintain a Security, which is required;
g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**; or
h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Procuring Entity may terminate the Contract for

convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment wasmade.

Except where otherwise specified, all Special *Conditions of Contract should be filled in by the Procuring Entity prior to issuance of the bidding document. Schedules and reports to be provided by the Procuring Entity should be annexed.*

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	A. General
GCC 1.1 (q)	The Procuring Entity is *The Director General,* *Kenya Urban Roads Authority (KURA),* *P.O. Box 41727 - 00100* ***NAIROBI***
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be **Fifteen (15) Months** *[If different dates are specified for completion of the Works by section ("sectional completion" or milestones), these dates should be listed here]*
GCC 1.1 (x)	The Project Manager is Director (RP&D), Kenya Urban Roads Authority (KURA), P.O. Box 41727 - 00100 NAIROBI . who shall be referred to as **"The Engineer".** Replace "Project Manager" with "Engineer" where it applies in this document
GCC 1.1 (z)	The Site is located *in NAIROBI COUNTY*
GCC 1.1 (cc)	The Start Date shall be *28 days after order to commence*
GCC 1.1 (gg)	The Works consist of **TRAFFIC CIRCULATION IMPROVEMENT WITHIN NAIROBI RAILWAY CITY IN NAIROBI COUNTY.**
GCC 2.2	Sectional Completions are: *[Not Applicable]*
GCC 5.1	The Project manager *[May]* delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: *[Not Applicable]*
GCC 9.1	**Key Personnel** GCC 9.1 is replaced with the following: 9.1 Key Personnel are the Contractor's personnel named in this GCC 9.1 of the Special Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid. [As per the qualification and Evaluation criteria in section III]
GCC 13.1	The minimum insurance amounts and deductibles shall be (1% of the Contract Sum for insured damage): (a) for loss or damage to the Works, Plant and Materials: *[insert amounts]*. (b) For loss or damage to Equipment: *[insert amounts]*. (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract *[insert amounts]*. (d) for personal injury or death:

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	(i) of the Contractor's employees: *[amount]*. (ii) of other people: *[amount]*.
GCC 14.1	Site Data are: *[list Site Data]*
GCC 20.1	The Site Possession Date(s) shall be: *Not later than Fourteen (14) days after issuance of Order to Commence*
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: *Institution of Engineers of Kenya (IEK)* *and/or Association of Consulting Engineers of Kenya (ACEK)*
	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: *[insert hourly fees and reimbursable expenses/ To be determined on case-by-case basis]*.
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within *[14]* days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is *[14]* days. The amount to be withheld for late submission of an updated Program is *[To be determined]*.
C. Quality Control	
GCC 34.1	**The Defects Liability Period is:** *[12 months].* *[The Defects Liability Period is usually limited to 12 months, but could be less in very simple cases]*
D. Cost Control	
GCC 38.9	If the value engineering proposal is approved by the Procuring Entity the amount to be paid to the Contractor shall be ___% *(Not Applicable)* of the reduction in the Contract Price.
GCC 44.1	The currency of the Procuring Entity's Country is: *[KShs]*.
GCC 45.1	The Contract is subject to price adjustment in accordance with GCC Clause 45
GCC 46.1	The proportion of payments retained is: *[5%]* *[The retention amount is usually close to 5 percent and in no case exceeds 10 percent.]*
GCC 47.1	The liquidated damages for the whole of the Works are *[*0.05% of Contract Sum*]* per day. The maximum amount of liquidated damages for the whole of the Works is *[5%]* of the final Contract Price. *[Usually liquidated damages are set between 0.05 percent and 0.10 percent per day, and the total amount is not to exceed between 5 percent and 10 percent of the Contract Price. If Sectional Completion and Damages per Section have been agreed, the latter should be specified here]*
GCC 48.1	The Bonus for the whole of the Works is *[Not Applicable]* per day. The maximum amount of Bonus for the whole of the Works is *[insert percentage]* of the final Contract Price. *[If early completion would provide benefits to the* Procuring Entity*, this clause should remain; otherwise delete. The Bonus is usually numerically equal to the liquidated damages.]*
GCC 49.1	The Advance Payments shall be: ***[Applicable]*** and shall be paid to the Contractor no later than

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	[Not Applicable)].
GCC 50.1	The Performance Security amount is *[10% (per cent) of Tender Sum in the form of Unconditional Bank Guarantee payable to the* Procuring Entity*]* (a) Performance Security – Bank Guarantee: in the amount(s) of *[Not Applicable]* percent of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount. (b) Performance Security – Performance Bond: in the amount(s) of *[insert related figure(s) depending the contract sum]* percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.
E. Finishing the Contract	
GCC 54.1	Taking over of any section shall only be conducted for a section which is complete with road marking and road signs installed where required.
GCC 56.1	The date by which operating and maintenance manuals are required is *[30 days]*. The date by which "as built" drawings are required is *[30 days]*.
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is ***[50% of the retention monies]***.
GCC 57.2 (g)	The maximum number of days is: *[Not Applicable]*.
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity's additional cost for completing the Works, is *[Not Applicable]*.

SUMMARY OF SPECIAL CONDITIONS OF CONTRACT

CONDITIONS	GCC CLAUSE	DATA
Procuring Entity's Name and Address	1.1(q)	DIRECTOR GENERAL, KENYA URBAN ROADS AUTHORITY, BARABARA PLAZA, BLOCK D, P.O. BOX 41727-00100, **NAIROBI** Tel. No.: +254 – 020 - 8013844/0717105233 dg@kura.go.ke
Engineer's address	1.1(x)	DIRECTOR (ROAD PLANNING AND DESIGN), KENYA URBAN ROADS AUTHORITY, BARABARA PLAZA, BLOCK D, P.O. BOX 41727-00100, **NAIROBI** info@kura.go.ke
Electronic transmission		APPLICABLE
Possession of the site	20.1	No later than Fourteen (14) days after the Order to commence. No later than the Commencement Date.
Performance Security	50.1	The performance security shall be in the form of an unconditional bank guarantee in the amount of Five **(5%) percent** of the Contract Price and denominated in Kenya Shillings.
Working Hours	6.5	Normal working hours shall be 8:00 a.m. to 5:00 p.m. on weekdays, including lunch break from 1.00 p.m. to 2.00 p.m. and 8:00 a.m. to 1:00 pm on Saturdays, with Sunday being set aside as a day of rest.
Commencement of Works	1.1(cc)	Not later than Twenty-Eight (28) days after Notice of Order to Commence.
Programme of Works	26.1	Not later than Fourteen (14) days after issuance of Order to Commence
Time for Completion	1.1 (u)	**Fifteen (15) Months.**
Amount of Liquidated Damages	47.1	0.05% of the Contract Price per day
Limit of Liquidated Damages	47.1	5% (Five percent) of the Contract Price.
Defects Liability Period	34.1	**12 months**
Retention Money	46.1	5% (Five percent) of Interim Payment Certificates
Limit of Retention Money	46.1	Limit of retention is 5% of the Contract Price.
Cash Flow Estimate	39.1	Not later than Fourteen (14) days after issuance of Order to Commence
Price Adjustment	45.1	The Contract is subject to price adjustment in accordance with GCC Clause 45
Advance Payment	49.1	The Advance Payment should be 10% of the Contract Price. Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds twenty percent (20%) of the

CONDITIONS	GCC CLAUSE	DATA
		Accepted Contract Amount less Provisional Sums and completed by eighty percent (80%) total of all certified interim payments.
Minimum Amount of Interim Payment Certificates	41	**Kshs. 20,000,000.00**
Time within which payment to be made after Interim Payment Certificate signed by Engineer	41.1	90 days
Periods for submission of insurance: Evidence of insurance	13.1	Prior to commencement of the Works, and in any case not later than 21 days after issuance of Order to Commence
Minimum amount of third-party insurance	13.1	1% of the Contract Sum. Not later than Fourteen (14) days after issuance of Order to Commence
Appointer of Arbitrator	24.5.1	Institution of Engineers of Kenya (IEK) and/or Association of Consulting Engineers of Kenya (ACEK)
Notice to Procuring Entity and Engineer	6.1	The Procuring Entity's address is: Director General Kenya Urban Roads Authority Barabara Plaza, Block D. P.O. Box 41727 – 00100 NAIROBI. Tel. +254 020 8013844 Email: dg@kura.go.ke, Web: www.kura.go.ke The Engineers' address is: Director (Road Planning and Design) Kenya Urban Roads Authority Barabara Plaza, Block D, Airport Road P.O. Box 41727 – 00100 NAIROBI. Tel. +254 020 8013844 Email: info@kura.go.ke, Web: www.kura.go.ke **The Contractor address is:** **Name**…. …… **P.O Box**…….. **City/Town**…… …. **Email**……..…. **Telephone**……

Signature of Tenderer…….. *Date* ……

FORM No 1: NOTIFICATION OF INTENTION TO AWARD

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

FORMAT

1. For the attention of Tenderer's Authorized Representative
   - *i)* Name: *[insert Authorized Representative's name]*
   - *ii)* Address: *[insert Authorized Representative's Address]*
   - *iii)* Telephone: *[insert Authorized Representative's telephone/fax numbers]*
   - *iv)* Email Address: *[insert Authorized Representative's email address]*

   [IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]

2. Date of transmission: [*email*] on [*date*] (local time)

   This Notification is sent by (*Name and designation*) _____

3. Notification of Intention to Award

   - *i)* Procuring Entity: *[insert the name of the Procuring Entity]*
   - *ii)* Project: *[insert name of project]*
   - *iii)* Contract title: *[insert the name of the contract]*
   - *iv)* Country: *[insert country where ITT is issued]*
   - *v)* ITT No: *[insert ITT reference number from Procurement Plan]*

   This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender

   Submit a Procurement-related Complaint in relation to the decision to award the contract.

   a) The successful tenderer
      i) Name of successful Tender__

      ii) Address of the successful Tender __

      iii) Contract price of the successful Tender Kenya Shillings

      _____

      (in words)

   b) Other Tenderers

   Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why not Evaluated
1				
2				
3				
4				

(Note a) State NE if not evaluated

5. How to request a debriefing

a) DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (*local time*).

b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.

c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

i) Attention: [*insert full name of person, if applicable*]

ii) Title/position: [*insert title/position*]

ii) Agency: [*insert name of Procuring Entity*]

iii) Email address: [*insert email address*]

d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint

a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:

i) Attention: [*insert full name of person, if applicable*]

ii) Title/position: [*insert title/position*]

iii) Agency: [*insert name of Procuring Entity*]

iv) Email address: [*insert email address*]

c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website info@ppra.go.ke or complaints@ppra.go.ke.

You should read these documents before preparing and submitting your complaint.

e) There are four essential requirements:

i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.

ii) The complaint can only challenge the decision to award the contract.

iii) You must submit the complaint within the period stated above.

iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

i) DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).

ii) The Standstill Period lasts Fourteen (14) Days after the date of transmission of this Notification of Intention to Award.

iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature:_____ **Name:**_____

Title/position:_____

Telephone:_____ **Email:**_____

FORM NO. 2 - REQUEST FOR REVIEW

FORM FOR REVIEW (r.203 (1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO……. OF……..….20……...

BETWEEN

……...……. APPLICANT (Review Board)

AND

……RESPONDENT (Procuring Entity)

Request for review of the decision of the…… (Name of the Procuring Entity of ……dated the…day of ……20…….in the matter of Tender No……..…of ……..20….. for .....(Tender description).

REQUEST FOR REVIEW

I/We……, the above named Applicant(s), of address: Physical address…….P. O. Box No……. Tel. No…….Email ……, hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

1.

2.

By this memorandum, the Applicant requests the Board for an order/orders that:

1.

2.

SIGNED ……(Applicant) Dated on…….day of ……/…20……

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on……day of ……....20…….

SIGNED

Board Secretary

FORM NO 3: NOTIFICATION OF AWARD - LETTER OFACCEPTANCE

[letterhead paper of the Procuring Entity] [date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by …… (*name of Procuring Entity).*

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature:.....

Name and Title of Signatory:.....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the_____day of_____, 20___, between _____of _____ (hereinafter "the Procuring Entity"), of the one part, and_____of_ _____(hereinafter "the Contractor"), of the other part:

WHEREAS the Procuring Entity desires that the Works known as_____should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
   a) the Letter of Acceptance
   b) the Letter of Tender
   c) the addenda Nos_____(if any)
   d) the Special Conditions of Contract
   e) the General Conditions of Contract;
   f) the Specifications
   g) the Drawings*;* and
   h) the completed Schedules and any other documents forming part of the contract.

3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by_____(for the Procuring Entity)

Signed and sealed by_____(for the Contractor).

FORM NO. 5 ~ PERFORMANCE SECURITY

[Option 1 ~ Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**___

_____*[Insert date of issue]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____(hereinafter called "the Contractor") has entered into Contract No._____dated_____with (*name of Procuring Entity*)_____(the Procuring Entity as the Beneficiary), for the execution of _____(hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in words*),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

4. This guarantee shall expire, no later than the …. Day of ……, 2……[2], and any demand for payment under it must be received by us at the office indicated above on or before that date.

5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[Name of Authorized Official, signature(s) and seals/stamps].

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

[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM No. 6 - PERFORMANCE SECURITY

[Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_____*[Insert date of issue].*

PERFORMANCE BOND No.:_____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond_____as Principal (hereinafter called "the Contractor") and_____] as Surety (hereinafter called "the Surety"), are held and firmly bound unto_____] as Obligee (hereinafter called "the Procuring Entity") in the amount of_____for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____day of_____, 20 , for_____in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
   1) complete the Contract in accordance with its terms and conditions; or
   2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
   3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day of_____20_____.

SIGNED ON_____on

behalf_____ of By_____in the capacity of

In the presence of _____

SIGNED ON_____on behalf of By_

_____in the capacity of In

the presence of _____

FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary:_____*[Insert name and Address of* Procuring Entity*]*

Date:_____*[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.:_____*[Insert guarantee reference number]*

Guarantor:_____*[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____(hereinafter called "the Contractor") has entered into Contract No._*dated*_____with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____(*in words*) is to be made against an advance payment guarantee.

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in words*_____)[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
   a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
   b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number____at____.

5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the day of_____, 2 ,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months][one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.*

[2] *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM NO. 8 - RETENTION MONEY SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____*[Insert name and Address of* Procuring Entity*]*

Date:_____*[Insert date of issue]*

Advance payment guarantee no. *[Insert guarantee reference number]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that_____*[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Contractor") has entered into Contract No. _____*[insert reference number of the contract]* dated_____with the Beneficiary, for the execution of_____*[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of /insert the second half of the Retention Money] is to be made against a Retention Money guarantee.

3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words_____])*[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number___at_____*[insert name and address of Applicant's bank].*

5. This guarantee shall expire no later than the …..... Day of ….....……, 2.....…[2], and any demand for payment under it must be received by us at the office indicated above on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*

[2] *Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*