



TENDER NO:

KWS/ONT/RMLF/114/2023-2024

**TENDER NAME: REHABILITATION AND
PERFORMANCE BASED MAINTENANCE OF JUNCT 7
- HIPPO POOLS - ATHI BASIN - JUNCT 10 ROAD
(UNCL_NNP_7) & JUNCT 7 - EAST GATE ROAD
(UNCL_NNP-9)**

IN

NAIROBI NATIONAL PARK

SEPTEMBER 2024

(OPEN TO ALL)

Closing Date: Tuesday, 17th September 2024 at 1000hrs EAT

KENYA WILDLIFE SERVICE,
P.O.BOX 40241 – 00100. NAIROBI.

www.kws.go.ke

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INVITATION TO TENDER

KENYA WILDLIFE SERVICE,

P.O.BOX 40241 –00100 NAIROBI.

hps@kws.go.ke

TENDER NO: KWS/ONT/RMLF/114/2023-2024

TENDER NAME: REHABILITATION AND PERFORMANCE BASED MAINTENANCE OF JUNCT 7 - HIPPO POOLS - ATHI BASIN - JUNCT 10 ROAD (UNCL_NNP_7) & JUNCT 7 - EAST GATE ROAD (UNCL_NNP-9) IN NAIROBI NATIONAL PARK

1. Kenya Wildlife Service invites sealed tenders for Rehabilitation and Performance-Based Maintenance of Junct 7 - Hippo Pools - Athi Basin - Junct 10 Road (UNCL_NNP_7) & Junct 7 - East Gate Road (UNCL_NNP-9) in Nairobi National Park.
2. Tendering will be conducted under the **National Open Competitive Method** using a standardized tender document. Tendering is **open to all interested and eligible tenderers**.

“TENDERERS WILL NOT BE ALLOWED TO TENDER FOR MORE THAN ONE BID”
3. Tenderers may obtain further information and inspect the Tender Documents during office hours i.e. 0800 to 1700 hours at the address given below.
4. A complete set of tender documents may be viewed or downloaded by interested candidates free of charge by downloading from the KWS website: www.kws.go.ke or from the PPIP portal: www.tenders.go.ke.
5. Tenderers may seek further clarifications through the email: hps@kws.go.ke, or through Kenya Wildlife Service, P.O Box 40241- 00100, Nairobi and Telephone number 0202379407. Any addenda to the tender document shall be published on the KWS website: www.kws.go.ke and on the PPIP portal: www.tenders.go.ke.
6. All Tenders must be accompanied by a Tender Security of **Ksh. 400,000.00 (Kenya Shillings Four Hundred Thousand)** in the standard format provided in the tender document and valid for a period of 156 days from the date of tender opening. The tender security shall be issued in Kenya Shillings or a freely convertible currency and in the form of Bank Guarantee or an Insurance Guarantee from Insurance Companies approved by PPRA /deposit taking Microfinance institutions, SACCO societies, Youth Enterprise Development Fund or Women Enterprise Development Fund.
7. The Tenderer shall chronologically serialize all pages of the tender documents submitted in the format described in the tender document.
8. Completed tenders must be delivered to the address below on or before **Tuesday, 17th September 2024 at 1000hrs East African Time**. Electronic Tenders **will not** be permitted.
9. Tenders will be opened immediately after the deadline date and time specified above or any deadline date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.
10. Late tenders will be rejected.
11. The addresses referred to above are:

A. Address for obtaining further information:

- 1) Kenya Wildlife Service
- (1) **Physical address for hand Courier Delivery** Shall be the office of Deputy Director Supply Chain Management located at Simba Court 1st Floor Kenya Wildlife Service Headquarters located along Lang'ata Road.
- (2) **Postal address** is Kenya Wildlife Service Headquarters located along Lang'ata Road, P. O. Box 40241-00100, NAIROBI, KENYA
- (3) **The contact person** is the Deputy Director Supply Chain Management, Kenya Wildlife Service, Telephone number 0202379407 and Email hps@kws.go.ke.

B. Address for Submission of Tenders.

- (1) **Name of Procuring Entity** Kenya Wildlife Service
Postal Address P. O. Box 40241-00100, NAIROBI, KENYA
Attention: Deputy Director Supply Chain Management
- (2) Physical address for: -
 - i. **Hand Delivery** shall be deposited in the Tender Box located at, Kenya Wildlife Service Headquarters, Main Reception, along Lang'ata Road
 - ii. **Courier delivery** shall be registered at the office of Deputy Director Supply Chain Management located at Simba Court 1st Floor Kenya Wildlife Service Headquarters along Lang'ata Road.

C. Address for Opening of Tenders.

- (1) Name of Procuring Entity - Kenya Wildlife Service
- (2) Physical address for the location Veterinary Conference Room, KWS Headquarters located along Lang'ata Road.

Name: **DR. ERUSTUS KANGA, EBS, HSC**

Designation: **DIRECTOR GENERAL**

Signature:

Date: **27TH AUGUST 2024**

PART 1 – TENDERING PROCEDURES

SECTION I - INSTRUCTIONS TO TENDERERS

A. General

1. Scope of Tender

- 1.1 The Procuring Entity, as indicated in the **TDS**, issues this tendering document for the procurement of Works and Services as listed below for the award of a Performance-based Road Contract. The name, identification, and number of lots (contracts) of this ITT are specified in the **TDS**. The Works and Services under the Performance-based Contract will cover the Roads indicated in the **TDS** and will consist of:
- a) Maintenance Services or “Services” consisting of all interventions on the Roads which are to be carried out by the contractor in order to achieve and keep the Road performance stand defined by the Service Level included in Section VII, Specifications for Works and Services of this tendering document, and all activities related to the management and evaluation of the road network under contract;
 - b) Rehabilitation Works, when requested in the **TDS** for the sections of the Road(s) indicated in the **TDS**, consisting of specific types of civil works described in the Specifications;
 - c) Improvement Works, when requested in the **TDS**, consisting of a set of specific interventions indicated in the Specifications to add new characteristics to the Roads in response to existing or new traffic and safety or other considerations;
 - d) Works consisting of activities needed to reinstate the Roads and reconstruct their structure or their right of way which has been damaged as a result of natural phenomena with imponderable consequences, such as strong storms, flooding, and earthquakes.

2. Interpretations

Throughout this tendering document:

The term “in writing” means communicated in written form (e.g. by mail, e-mail, and fax, including if specified in the **TDS**, distributed or received through electronic-procurement system used by the Procuring Entity) with proof of receipt;

if the context so requires, “singular” means “plural” and vice versa; and “Day” means calendar day, unless otherwise specified as a “Business Day.” A Business Day is any day that is a working day of the Procuring Entity. It excludes the Procuring Entity's official public holidays.

3. Fraud and Corruption

- 3.1 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.
- 3.2 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.
- 3.3 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.
- 3.4 Tenderers shall permit and shall cause their agents (where declared or not), subcontractors, sub consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.

4. Eligible Tenderers

- 4.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 4.6 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 Form of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of JV members shall be specified in the **TDS**.
- 4.2 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 with such relatives are also not allowed to participate in any procurement proceedings.
- 4.3 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) Or 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) Or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity or 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 project specified in the **TDS** ITT 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; 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 tendering 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.
- 4.4 A firm that is 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.
- 4.5 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.9. A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case maybe. 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.
- 4.6 Tenderer that has been debarred from participating in public procurement shall be ineligible to be prequalified for a tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA www.ppra.go.ke or email complaints@ppra.go.ke.

- 4.7 Tenderers that are state-owned enterprises or institutions in Kenya may be eligible to compete and be awarded a Contract(s) only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Procuring Entity.
- 4.8 Tenderer shall not be under suspension from Tendering by the Procuring Entity as the result of the operation of a Tender-Securing or Proposal-Securing Declaration.
- 4.9 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, if 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.
- 4.10 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 provided in “SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9”.
- 4.11 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.
- 4.12 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 for foreign contractors 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.
- 4.13 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
- 4.14 A Tenderer may be considered ineligible if he/she offers 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.
- 4.15 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax compliance or tax exemption certificate issued by the Kenya Revenue Authority.

5. Eligible Materials, Equipment, and Services

- 5.1 The materials, equipment and services to be supplied under the Contract may have their origin in any eligible country and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of materials, equipment and services.
- 5.2 For purposes of ITT 5.1 above, “origin” means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that is substantially different in its basic characteristics or in purpose or utility from its components.

B. Contents of Tendering Document

6. Sections of Tendering Document

- 6.1 The tendering document consists of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITT 10.

PART 1 - Tendering Procedures

Section I- Instructions to Tenderers (ITT)

Section II-Tender Data Sheet (TDS)

Section III- Evaluation and Qualification Criteria

Section IV-Tendering Forms

PART 2 - Works and Services' Requirements

Section V - Specifications

PART3-Conditions of Contract and Contract Forms

Section VI - General Conditions of Contract

Section VII - Special Conditions of Contract Section VIII-Contract Forms

- 6.2 The Invitation to Tender (ITT) or the notice to the prequalified Tenderers issued by the Procuring Entity is not part of the tendering document.
- 6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the tendering document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the tendering document in accordance with ITT 10. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.
- 6.4 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the tendering document and to furnish with its Tender all information and documentation as is required by the tendering document.

7. Site Visit

- 7.1 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 the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

8. Pre-Tender Meeting and a pre-arranged pretender site visit

- 8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender conference will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender visit of the site of the works 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 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 anonymized (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 shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 10 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 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 so specified in the TDS, the Procuring Entity shall also promptly publish its response at the web page identified in the TDS. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents appropriately following the procedure under ITT 10.

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 website 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 24.2 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 translation of the relevant passages in 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 Bills of Quantities completed in accordance with ITT 14 and ITT 16;
 - c Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
 - d Alternative Tender, if permissible, in accordance with ITT 15;
 - e Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
 - f Qualifications: documentary evidence in accordance with ITT 19 establishing the Tenderer's qualifications, or continued qualified status, as the case may be, 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 13.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a Form 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.
- 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 Bills of Quantities, shall be prepared using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Tenderer chronologically serialize all pages of the tender documents submitted.

15. Alternative Tenders

- 15.1 Unless otherwise indicated in the **TDS**, alternative Tenders shall not be considered.
- 15.2 When alternative times for reaching the required Service Levels or for the completion of Rehabilitation or Improvement Works are explicitly invited, a statement to that effect will be included in the **TDS**, as will the method of evaluating different times for completion.
- 15.3 Except as provided under ITT 15.4 below, Tenderers wishing to offer technical alternatives to the requirements of the tendering document must first price the Procuring Entity's design as described in the tendering document 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 Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.
- 15.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Rehabilitation and/or Improvement Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works and Services' Requirements.

16. Tender Prices and Discounts

- 16.1 The prices and discounts quoted by the Tenderer in the Form of Tender and in the Bills 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 and Services described in the Bills of Quantities. Items against which no rate or price is entered by the Tenderer will not be paid for by the Procuring Entity when executed and shall be deemed covered by the rates for other items and prices in the Bills 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, excluding 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 16.1.
- 16.5 Unless otherwise provided in the **TDS** and the Contract, the rates and prices quoted by the Tenderer are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. 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 If so indicated in ITT 1.1, Tenders are being invited for individual lots (contracts) or for any combination of lots (packages). Tenderers wishing to offer any price reduction for the award of more than one Contract shall specify in their tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are submitted and 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 28 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 The currency (ies) of the Tender and the currency (ies) of payments shall be the same and shall be as specified in the **TDS**.
- 17.2 Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their foreign currency requirements, and to substantiate that the amounts shown in the Summary of Payment Currency Schedule, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

18. Documents Comprising the Technical Proposal

- 18.1 The Tenderer shall furnish a technical proposal (if so required) including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tendering Forms, in sufficient detail to demonstrate the adequacy of the Tenderers' proposal to meet the work and services' requirements and the completion time.

19. Documents Establishing the Qualifications of the Tenderer

- 19.1 To establish Tenderer's eligibility in accordance with ITT 4, Tenderers shall complete the Form of Tender, included in Section IV, Tendering Forms.
- 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, Tendering Forms.
- 19.3 If a margin of preference applies as specified in accordance with ITT 36.1, domestic Tenderers, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 36.1.
- 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 particular 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 19.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 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 tenderer will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.
- 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 19.9 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 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, 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 26.3.

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**.
- 21.1 A Tender-Securing Declaration shall use the form included in Section IV, Tendering Forms.
- 21.2 The Tender Security shall be a demand guarantee at the Tenderer's option, in any of the following forms:
- a cash;
 - i. a bank guarantee;
 - ii. a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority; or
 - iii. a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.
 - iv. Other forms of Security as specified in the **TDS**.
- 21.3 If the unconditional guarantee is issued by a non-bank financial institution located outside Kenya, the issuing non-bank financial institution shall have a correspondent financial institution located in Kenya to make it enforceable unless the Procuring Entity has agreed in writing, prior to tender submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Tender Security shall be submitted either using the Tender Security Form included in Section IV, Tendering Forms, or in another substantially similar format approved by the Procuring Entity prior to Tender submission. 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 24.2.
- 21.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 21.1, 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. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined non responsive or a bidder declines to extend tender validity period.
- 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.
- 21.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:
- a if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereto provided by the Tenderer; or
 - b if the successful Tenderer fails to:
 - i. sign the Contract in accordance with ITT 48; or
 - ii. furnish a performance security.
- 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 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 Form of intent referred to in ITT 4.1 and ITT 13.2.

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 so as 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 13; 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.

23.2 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.

23.3 Where a tender package or container cannot fit in the tender box, the procuring entity shall:

- a Specify in the **TDS** where such documents should be received.
- b Maintain a record of tenders received and issue acknowledgement receipt note to each tenderer specifying time and date of receipt.
- c Ensure all tenders received are handed over to the tender opening committee for opening at the specified opening place and time.

23.4 If all envelopes are 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 and no later than the date and time indicated 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 tendering document in accordance with ITT 10, 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 22. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

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 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

- a prepared and submitted in accordance with ITT 20 and ITT 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
- b received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 22.

26.2 Tenders requested to be withdrawn in accordance with ITT 24.1 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 Form or any extension thereof.

27. Tender Opening

27.1 Except in the cases specified in ITT 23 and ITT 24.2, the Procuring Entity shall publicly open and read out in accordance with this ITT all Tenders received by the deadline, at the date, time and place specified in the **TDS**,

in the presence of Tenderers' designated representatives and anyone who chooses to attend. Any specific electronic Tender opening procedures required if electronic tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS**.

- 27.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope 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, 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. The Form of Tender and the Bill of Quantities are to be initialed by representatives of the Procuring Entity attending Tender opening in the manner specified in the **TDS**.
- 27.7 The Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 23.1).
- 27.8 The Procuring Entity shall prepare a record of the Tender opening that shall include, as a minimum:
- i. The name of the Tenderer and whether there is a withdrawal, substitution, or modification;
 - ii. The Tender Price, per lot (contract) if applicable, including any discounts;
 - iii. Any alternative Tenders;
 - iv. The presence or absence of a Tender Security, if one was required.
 - v. Number of pages of each tender document submitted
- 27.9 The Tenderers' representatives who are present shall be requested to sign the record. The omission of a Tenderer's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Tenderers. A copy of the tender opening register shall be issued to a Tenderer upon request

E. Evaluation and Comparison of Tenders

28. Confidentiality

- 29.0 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 such process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 43.
- 29.1 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.
- 29.2 Notwithstanding ITT 28.2, from the time of Tender opening to the time of Contract award, if any Tenderer wishes to contact the Procuring Entity on any matter related to the Tendering process, it may 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. 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 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 Contracting Agency'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 tendering document; "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tendering document; and
- b "Omission" is the failure to submit part or all of the information or documentation required in the tendering 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 tendering document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- a. If accepted, would:
 - i. Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - ii. Limit in any substantial way, in consistent with the tendering document, the Procuring Entity's rights or the Tenderer's obligations under the proposed Contract; or
 - b. 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 ITT18, Technical Proposal, in particular, to confirm that all requirements of Section VII, Specifications for Works and Services have been met without any material deviation, reservation or omission.
- 31.4 If a Tender is not substantially responsive to the requirements of the tendering 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 of time, to rectify nonmaterial non-conformities in the Tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the Tender. Failure of the Tenderer to comply with the request may result in the rejection of its Tender.
- 32.3 Provided that a Tender is substantially responsive, the Procuring Entity shall rectify 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. Correction of 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 anyway 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, 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 award.

34. Conversion to Single Currency

34.1 For evaluation and comparison purposes, the currency (ies) of the Tender shall be converted into a single currency which is Kenya Shillings. The source of the exchange rates shall be the Central Bank of Kenya.

35. Nominated Subcontractors

- 35.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. In case the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- 35.2 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.
- 35.1 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 so by the Procuring Entity in the **TDS** as can be met by subcontractors referred to here after 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.

36. Margin of Preference and Reservations

- 36.1 A margin of preference on local contractors may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.
- 36.2 A margin of preference shall not be allowed unless it is specified so in the **TDS**.
- 36.3 Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 36.5.
- 36.4 An individual firm is considered a Kenyan tenderer for purposes of the margin of preference if it is registered in Kenya, has more than 51 percent ownership by nationals of Kenya, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as Kenyan Tenderer and eligible for domestic preference only if the individual member firms are registered in Kenya or have more than 51 percent ownership by nationals of Kenya, and the JV shall be registered in Kenya. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms.
- 36.5 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by a competent authority, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

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 39.
- 37.2 To evaluate a Tender, the Procuring Entity shall consider the following:
 - a Price adjustment due to discounts offered in accordance with ITT 16.4;
 - b Price adjustment due to quantifiable non material non-conformities in accordance with ITT 32.3;

- c converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 34; 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 are allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) and for combinations, including any discounts offered in the Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.
- 37.5 The price of the Rehabilitation and Improvement Works included in each Tender shall not be higher than the threshold indicated in the **TDS**. If the Tenderer estimates that its costs for the Rehabilitation and Improvement Works are higher than the threshold indicated in the **TDS**, it shall include the portion above the threshold in its price for the Maintenance Services. If the Tender price in the Best Evaluated Tender is above the threshold indicated in the **TDS** for the Rehabilitation and Improvement Works, the Procuring Entity may reject the Tender.

38. Comparison of Tenders

- 38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders in accordance with ITT 34.2 to determine the Tender that has the lowest evaluated cost.
- 38.2 After application of the criteria established in ITT 37.1 to ITT 37.5, the Evaluated Tender Price for comparison of Tenders will be:
- a The lump-sum price offered by the Tenderer for the Maintenance Services; plus
 - b The lump-sum price offered by the Tenderer for the Rehabilitation Works, if the tendering document requires prices for this type of works; plus
 - c the total price of the priced Bill of Quantities for the Improvement Works, if the tendering document requires prices for this type of works; plus
 - d the total price of the priced Bill of Quantities for the Emergency Works.

39. Abnormally Low Tenders

- 39.1 An Abnormally Low Tender is one where the Tender price, in combination with other constituent elements of the Tender, appears unreasonably low to the extent that the Tender price raises material concerns as to the capability of the Tenderer to perform the Contract for the offered Tender price.
- 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 tendering 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 Tenders or Front Loaded

- 41.1 If the Tender that is evaluated as the lowest evaluated cost is, in the Procuring Entity's opinion, seriously unbalanced 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 tendering 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 amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding 20% of the Contract price; or
 - c) Reject the Tender.

42. Qualification of the Tenderer

- 42.1 The Procuring Entity shall determine to its satisfaction whether the 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 or, if prequalification has taken place, continues to be eligible and continues to meet the qualifying 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 19.2. 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 **TDS** when prequalification has not taken place) 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 next lowest evaluated Tender to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

43. Lowest Evaluated Tender

- 43.1 Having compared the evaluated costs 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 tendering document; and
 - b) The lowest evaluated cost.

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 Tendering 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.

45. Notice of Intention to enter in to a Contract

- 45.1 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 © 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;

46. Standstill Period

- 46.1 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. Where only one Tender is submitted, the Standstill Period shall not apply.
- 46.2 Where a Standstill Period applies, it shall commence 100when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

47. Debriefing by the Procuring Entity

47.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a 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.

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

F. Contract Negotiations and Award of Contract

48. Negotiations

- 48.1 Before signature of contract, the procuring Entity may conduct negotiations with the best evaluated tenderer. The negotiations will be held at the date and address indicated in the **TDS** with the Tender's Representatives who must have written power of attorney to negotiate a Contract on behalf of the Tenderer.
- 48.2 The Procuring Entity shall prepare minutes of negotiations that are signed by the Procuring Entity and the Tender's authorized representative.
- 48.3 The negotiations include discussions of the Schedule of Requirements, the proposed methodology, the Procuring Entity's inputs, the Special Conditions of the Contract, and finalizing the "Works and Services' Requirements" part of the Contract. These discussions shall not substantially alter the original scope of services or the terms of the contract, lest the quality of the final product, its price, or the relevance of the initial evaluation be affected.
- 48.4 The financial negotiations include the clarification of the tax liability in Kenya and how it should be reflected in the Contract. If the selection method included cost as a factor in the evaluation, the total price stated in the Financial Proposal for a Lump-Sum contract shall not be negotiated. The Procuring Entity may ask for clarifications and, if the costs are very high, ask to change the rates.
- 48.5 The negotiations are concluded with a review of the finalized draft Contract, which then shall be initialed by the Procuring Entity and the Tender's authorized representative. If the negotiations fail, the Procuring Entity shall inform the Tender in writing of all pending issues and disagreements and provide a final opportunity to the Tenderer to respond. If disagreement persists, the Procuring Entity shall terminate the negotiations informing the Tenderer of the reasons for doing so. The Procuring Entity will invite the next-ranked Tenderer to negotiate a Contract. Once the Procuring Entity commences negotiations with the next-ranked Tenderer, the Procuring Entity shall not reopen the earlier negotiations.

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 44.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

50. Signing of Contract

- 50.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties

meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.

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

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

51. Performance Security

- 51.1 Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and if required in the **TDS**, using for that purpose the Performance Security Forms included in Section VIII, Contract Forms, or another form acceptable to the Procuring Entity. If the Performance Security furnished by the successful Tenderer is in the form of a bond, it shall be issued by a bonding or insurance company that has been verified by the successful Tenderer to be acceptable to the Procuring Entity. A foreign institution providing a bond shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent financial institution is not required.
- 51.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security 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. Publication of Procurement Contract

- 52.1 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; names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

53. Procurement Related Complaints and Administrative Review

53.1 The procedures for making a Procurement-related Complaint are as specified in the **TDS**.

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

SECTION II - TENDER DATA SHEET

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

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
A. General	
ITT 1.1	The reference number of the Invitation to Tender is: KWS/ONT/RMLF/114/2023-2024 The Procuring Entity is: KENYA WILDLIFE SERVICE The name of the Tender is: REHABILITATION AND PERFORMANCE BASED MAINTENANCE OF JUNCT 7 - HIPPO POOLS - ATHI BASIN - JUNCT 10 ROAD (UNCL_NNP_7) & JUNCT 7 - EAST GATE ROAD (UNCL_NNP-9) IN NAIROBI NATIONAL PARK The roads are: i. JUNCT 7 - HIPPO POOLS - ATHI BASIN - JUNCT 10 ROAD (UNCL_NNP_7) ii. JUNCT 7 - EAST GATE ROAD (UNCL_NNP-9MAIN GATE - JUNCT 2 ROAD (UNCL_NNP_4) Rehabilitation Works are required. The sections of the Road(s) subject to Rehabilitation Works are: i. JUNCT 7 - HIPPO POOLS - ATHI BASIN - JUNCT 10 ROAD (UNCL_NNP_7) ii. JUNCT 7 - EAST GATE ROAD (UNCL_NNP-9MAIN GATE - JUNCT 2 ROAD (UNCL_NNP_4) Improvement Works are not required.
ITT 2.1 (a)	Electronic –Procurement System The electronic-procurement system shall NOT be used
ITT 4.1	Maximum number of members in the JV shall be: JOINT VENTURES SHALL NOT BE ALLOWED.
ITT 4.11	The Tenderer will require to registered with _____ whose contact addresses are: NOT APPLICABLE
B. Tendering Document	
8.1	(A) A MANDATORY pre-arranged pretender site visit shall take place at the following date, time and place: Date: Wednesday, 11th September 2024 Time: 2:00 pm Place: Nairobi National Park – East Gate (B) Pre-Tender meeting Shall take place at the following date, time and place: Date: Wednesday, 11th September 2024 Time: 2:00 pm Place: Nairobi National Park – East Gate

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	(C) The following SHALL be required during the pre-tender site visit and meeting: a) Each company shall be represented by a nominated technical representative. b) The technical representative above shall represent only one (1) company in each tender. c) The technical representative shall bring Original National ID/Passport and hard copies of the following documents which will be retained by KWS for verification: • An ORIGINAL introductory letter on the company's letter head signed and stamped by the company's director. The letter shall indicate the name, National ID / Passport no. of the representative, and shall be referenced to the tender the bidder is participating. • CERTIFIED copies of the National ID/Passport and Academic Qualifications equivalent to that of the Site Agent described in the tender document. d) The attendance register shall be filled and closed at the end of the pre-tender site visit by the tenderers and witnessed by KWS representatives. e) Certificate of site visit shall be signed at the end of the pre-tender site visit by the bidder's representative and witnessed by the KWS representatives on the date of organized site visit. The Certificate of site visit SHALL be submitted by the bidders together with their bid document. Note: The original introductory letter, Copies of National ID/Passport and copies of academic qualifications shall be retained by the procuring entity.
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 3 days prior to the pretender site visit meeting.
ITT 8.4	The minutes of the pre-tender meeting and the pre-arranged pre-tender site visit will be emailed to respective tenderers upon request.
ITT 9.1	The Tenderer will submit any request for clarifications in writing at the Address: Director General, Attention: Deputy Director Supply Chain Management Kenya Wildlife Service, P.O. Box 40241 – 00100 Nairobi Tel: 0202379407 Email: hps@kws.go.ke (i) To reach the Kenya Wildlife Service not later than 3 days prior to the deadline for submission of tenders. (ii) Kenya Wildlife Service will publish its response on its website www.kws.go.ke
C. Preparation of Tenders	
ITP 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: i) Copy of Certificate of Incorporation/Business Registration name under the Companies Act or Partnership Deed duly Certified by a Commissioner for oaths ii) A current copy of Form CR12 for limited companies issued by the Registrar of Companies that indicates the ownership of the company (not older than 12 months, as at the time of the tender Closing). Form CR12 shall be duly certified by a Commissioner for oaths. This should be provided with Identification documents of all directors listed on the CR12 (ID or Passport). iii) Copy of a valid Tax Compliance Certificate from Kenya Revenue Authority(KRA)

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	as at the time of tender opening/closing. iv) Valid current annual NCA practicing license for either category 5, 4, 3, 2, or 1 v) A declaration that the bidder will not engage in any corrupt or fraudulent practice. vi) A declaration that the bidder or her sub-contractor(s) are not debarred from participating in procurement proceedings by Public Procurement Regulatory Authority (PPRA). vii) An Original copy of duly filled, signed and stamped site visit certificate viii) A certified copy of PBC training certificate (for the Road Manager of the bidding company) by Kenya Institute of Highways and Building Technology (KIHBT) or any other Accredited Institution Registered in Kenya. Note The certifications by the Commissioner for oaths MUST be original bearing the original stamp, signature and the date of certification. The certifications should not be older than one month from date of tender opening.
ITT 15.1	Alternative Tenders SHALL NOT BE PERMITTED.
ITT 15.2	Alternative times for reaching the required Service Levels and for the completion of the Rehabilitation and/or Improvement Works WILL NOT BE permitted.
ITT 15.4	Alternative technical solutions for the Rehabilitation and/or Improvement Works SHALL NOT BE permitted
ITT 16.5	The prices quoted by the Tenderer shall be: FIXED
ITT 16.8	The price estimated of works is Ksh. 21,236,749.65 (Kenya Shillings, Twenty-One Million, Two Hundred Thirty-Six Thousand, Seven Hundred and Forty-Nine, Cents Sixty-Five)
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 126 days.
ITT 21.1	A Tender Security shall be required. E-Tender securities are acceptable and shall be authenticated by the QR scanner A Tender-Securing Declaration shall not be required. The Tender Security amount shall be Ksh. 400,000.00 (Kenya Shillings Four Hundred Thousand) in the standard format provided in the tender document and valid for a period of 156 days from the date of tender opening. The tender security shall be issued in Kenya Shillings or a freely convertible currency and in the form of Bank Guarantee or an Insurance Guarantee from Insurance Companies approved by PPRA / deposit taking Microfinance institutions, SACCO societies, Youth Enterprise Development Fund or Women Enterprise Development Fund.
ITT 21.3 (v)	Other types of acceptable securities: ARE NOT ACCEPTABLE
ITT 22.1	The tenderer MUST submit ORIGINAL bid document. Copies will not be required. The submitted tender document MUST be TAPE/BOOK BOUND (Spiral Bound or other forms of binding will not be accepted) and MUST be arranged in the format provided below: 1. Letter of Invitation to Tender 2. Instruction to Tenders 3. Tender Data Sheet (TDS) 4. Form of Tender 5. Tenderer's Eligibility- Confidential Business Questionnaire, 6. Certificate of Independent Tender Determination 7. Self-Declaration of The Tenderer 8. A Declaration and Commitment to the Code of Ethics 9. Written Form of Power of Attorney,

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	10. Tender Security /Tender Securing Declaration 11. Copy of Certificate of Incorporation/Registration 12. Copy of Current Form CR12 13. Copy of Valid Tax Compliance Certificate 14. Copy of Current Annual NCA Practicing License for Respective NCA 15. Category as per the Published “Schedule of Road Tenders FY2023- 2024” 16. Tenderer Information Form (Form Eli-1) 17. Schedule of Major Items of Plant (Form Equ: Equipment). 18. Contractor’s Representative and Key Personnel Schedule (Form Per 1) and Signed Resume & Declaration Forms of Contractor’s Representative and Key Personnel (Form Per 2) With Qualifications Certificates. 19. General Construction Experience (Form Exp – 4.1) 20. Specific Construction and Contract Management Experience [Form Exp – 4.2(A)] 21. Construction Experience in Key Activities [Form Exp – 4.2(B)] 22. Current Contract Commitments / Works in Progress (Form Fin – 3.4) 23. Financial Situation and Performance (Form Fin – 3.1) 24. Audited Financial Accounts. 25. Average Annual Construction Turnover (Form Fin – 3.2) 26. Financial Resources (Form Fin – 3.3) 27. Historical Contract Non-Performance, Pending Litigation and Litigation History (Form Con – 2) 28. Work Execution Programme. 29. Priced Bill of Quantities 30. Drawings 31. Standard Specifications 32. Special Specifications 33. General Conditions of Contract. 34. Special Conditions of Contract 35. Addendum(a).
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: A CURRENT VALID AUTHORIZATION LETTER FROM THE FIRM (ADMINISTERED BY A COMMISSIONER FOR OATHS) PERMITTING THE DESIGNATED OFFICIAL TO SIGN THE DOCUMENT ON ITS BEHALF. THIS LETTER MUST BE ORIGINAL AND REFERENCED TO THE TENDER. IN ADDITION THE PERSON GIVEN POWER OF ATTORNEY MUST HAVE HIS/HER CERTIFIED IDENTIFICATION DOCUMENT ATTACHED
D. Submission and Opening of Tenders	
ITT 24.1	(A) For <u>Tender submission purposes</u> only, the Procuring Entity’s address is: (1) Name of Procuring Entity - Kenya Wildlife Service (2) Postal Address: P.O Box 40241-00100, Nairobi, (Attention Director General) i. Physical address for hand Courier Hand Delivery Shall be deposited in the Tender Box located at, Kenya Wildlife Service Headquarters, Main Reception, along Lang’ata Road. ii. Courier delivery shall be registered at the office of Deputy DirectorSupply Chain Management located at Simba Court 1st Floor Kenya Wildlife Service Headquarters along Lang’ata Road. (4) Date and time for submission of Tenders Tuesday, 17th September 2024 at 1000hrs EAT (5) Tenderers shall shall not submit tenders electronically.
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of Tenders provided below:

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	(1) Name of Procuring Entity - Kenya Wildlife Service (2) Postal Address: P.O Box 40241-00100, Nairobi (3) Tuesday, 17th September 2024 at 1000hrs EAT The electronic Tender opening procedures shall be: NOT APPLICABLE
ITT 27.6	The Form of Tender and priced Bills of Quantities SHALL be initialed by representatives of the Procuring Entity attending Tender opening. Initialization shall be conducted by all members of the tender opening committee as follows: • Initialize/Sign and stamp the cover page of the Bid Document • Initialize/Sign Form of Tender • Initialize/Sign Summary page of BOQ,
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, Kenya Wildlife Service shall use its Lowest estimate.
ITT 35.1	The Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity.
ITT 35.2	The volume of works that can be subcontracted is 0% of the total contract price.
ITT 35.3	The subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works.
ITT 36.2	A margin of domestic preference shall not apply.
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria. Including: 1. The tenderer Shall submit ONE original tender document. 2. The submitted tender document MUST be TAPE / BOOK BOUND (Spiral Bound or other forms of binding will not be accepted) and MUST be arranged in the format provided below: 3. Form of Tender on company's Letter head 4. Tenderer's Eligibility- Confidential Business Questionnaire, 5. Certificate of Independent Tender Determination 6. Tenderer Information Form (Form Eli-1) 7. Tender Security /Tender Securing Declaration 8. Category as per the Published "Schedule of Road Tenders FY 2023-2024" 9. Copy of Current Form CR12 10. Copy of Certificate of Incorporation/Registration 11. Copy of Valid Tax Compliance Certificate 12. Copy of Current Annual NCA Practicing License for Respective NCA 13. Self-Declaration Forms by the Tenderer 14. A Declaration and Commitment to the Code of Ethics 15. Written Form of Power of Attorney, 16. Schedule 1: Certificate of site visit 17. Historical Contract Non-Performance, Pending Litigation and Litigation History (Form Con – 2) 18. Financial Situation and Performance (Form Fin – 3.1) 19. Average Annual Construction Turnover (Form Fin – 3.2) 20. Financial Resources (Form Fin – 3.3) 21. Current Contract Commitments / Works in Progress (Form Fin – 3.4)

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	22. Audited Financial Accounts. 23. General Construction Experience (Form Exp – 4.1) 24. Specific Construction and Contract Management Experience [Form Exp – 4.2(A)] 25. Construction Experience in Key Activities [Form Exp – 4.2(B)] 26. Contractor’s Representative and Key Personnel Schedule (Form Per 1) and Signed Resume & Declaration Forms of Contractor’s Representative and Key Personnel (Form Per 2) With Qualifications Certificates. 27. Work Execution Programme. 28. Schedule of Major Items of Plant (Form Equ: Equipment). 29. Priced Bill of Quantities 30. Schedule G-Schedule of Basic Materials and Derivation of Unit Cost 31. Drawings 32. Standard Specifications 33. Special Specifications 34. General Conditions of Contract. 35. Special Conditions of Contract 36. Letter of Invitation to Tender 37. Instruction to Tenders 38. Tender Data Sheet (TDS) 39. Addendum(a)
ITT 37.5	The combined price for the Rehabilitation and Improvement Works may not exceed the following threshold: Option 1: 65% of the total contract price excluding provisional sums
ITT 48.1	Contract negotiations with the best evaluated tenderer will be held at the office of the Deputy Director Supply Chain Management, Located at Simba Court 1 st Floor Kenya Wildlife Service Headquarters along Lang’ata Road.
ITT 51.1	Performance Security; other documents required are, list: • An Acceptance Letter within fourteen (14) days from the date of letter of award. • An irrevocable and unconditional Performance Bank Guarantee equivalent to Five Percent (5%) of the contract price awarded as per the format stipulated in the tender document; • Contractors All Risk Policy, Work Injury Benefits Act (WIBA) Insurance Cover and other relevant insurance policies necessary during the execution of the works; • Programme of works showing the general methods, order timing and sequence for all activities of the works; • Detailed Cash Flow projection for the entire contract period.
ITT 53.1	The procedures for making a Procurement-related Complaint are available from the PPRA website info@ppra.go.ke or complaints@ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to: For the attention: LEAH NAISOI Title/position: DEPUTY DIRECTOR SUPPLY CHAIN MANAGEMENT Procuring Entity: KENYA WILDLIFE SERVICE Email address: hps@kws.go.ke In summary, a Procurement-related Complaint may challenge any of the following: (i) The terms of the Tender Documents; and The Procuring Entity’s decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provisions

- 1.1 Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:
- For construction turnover or financial data required for each Year-Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
 - Value of single Contract-Exchange rate prevailing on the date of the contract signature.
 - Exchange rates shall be taken from the publicly available source identified in the ITT. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.
- 1.2 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 and meets all the requirements of “Part 2 – Works and Services '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.

The Preliminary evaluation criteria attached]

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

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

- Adequacy and quality of the proposed methodology, and work plan in responding to the schedule of Requirements:
 - Work Execution Programme - 66 marks**
The tenderer to provide
 - Work Execution Programme (site layout plan; site organization chart; material mobilization plan; equipment management plan; personnel mobilization and management plan) – 10 marks*
 - Quality and Quantity Management Plan (methodology statement; proposals on material testing; proposals on measurements, photographic plan) – 31 marks*
 - Work scheduling (work programme chart; cash flow plan) – 12 marks*
 - Works safety management (traffic control; accident prevention; worker’s safety – 8 marks*
 - Environmental and Social Management Plan – 5 marks*
 - Contractor’s Representative & Key Personnel - 34 marks**
 - Duly filled, signed and stamped Form PER. 1 and Form PER. 2 and attached relevant documents*

– **4 marks**

- *Road Manager Qualification and Experience – 9 marks*
- *Site Agent Qualification and Experience – 9 marks*
- *Site Foreman Qualification and Experience – 6 marks*
- *Site Surveyor Qualification and Experience – 6 marks.*

Total points for the two (2) criteria: **100 marks**

The minimum Technical Score (s) required to pass is: **80 marks**

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

4. Tender Evaluation (ITT 35)

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

- i) Alternative Completion Times under ITT 13.2, **NOT PERMITTED**
- ii) Alternative Technical Solutions for specified parts of the Works, **NOT PERMITTED**
- iii) Other Criteria; under ITT 35.2 (e): **As per Tender Document**

5. Multiple Contracts

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

OPTION 1

- 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 NOT APPLICABLE

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) NOT APPLICABLE

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

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part 2– Works and Services' 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 NOT APPLICABLE

- 7.1 If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded one valuated price of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty-one percent (51%).
- 7.2 Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contractor or group of contractors qualifies for a margin of preference.

- 7.3 After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders shall be classified into the following groups:
- Group A:* tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).
 - Group B:* tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).
- 7.4 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 3.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group B and the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

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

- In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of prequalification data, if so required.
- 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.
 - 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 **Ksh. 4,250,000.00**.
 - Minimum average annual construction turnover of **Ksh. 53,100,000.00**, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last **3 years, divided by 3 years**.
 - At least **2 (Two)** of contract(s) of a similar nature executed within Kenya, or the East African Community, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value of **Ksh. 17,000,000.00**, equivalent.
 - Contractor's Representative and Key Personnel, which are specified as **per Evaluation Criteria**
 - Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as

S/No	Details of Equipment required by the Tender	Minimum Number required for the Contract Execution
1.	Mobile Concrete Mixers	-
2.	Concrete Vibrator	-
3.	6 X 4 tippers payload 16 – 20 tonnes	4
4.	Water tankers (18,000 – 20,000lts. capacity)	1
5.	Wheeled loaders (2m ³)	1
6.	Motor graders (93 - 205kW) – 120 HP	2
7.	Crawler Dozer (D6 and above) or Excavator	1
8.	Self-propelled single Flat drum vibrating (10tons)	2
9.	Plate compactor	-
10.	Bitumen Distributor	-
11.	Chips Spreader	-

- 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 **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 years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

QUALIFICATION FORM SUMMARY

1. Preliminary Evaluation Criteria

Kenya Wildlife Service will undertake a preliminary evaluation of all tenders using the following criteria, sub-criteria, and assessment system to ensure they meet in all respects the eligibility criteria and other requirements in the ITT.

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 4.5	Forms ELI – 1.1 Attach additional information; • Certified Copy of National Identification Card / Passport (Full clear copy showing all the required details) • A current copy of Form CR12 for limited companies issued by the Registrar of Companies that indicates the ownership of the company (not older than 12 months, as at the time of the tender Closing). Form CR12 shall be dully certified by a Commissioner for oaths. This should be provided with Identification documents of all directors listed on the CR12 (ID or Passport). Note All documents above shall be certified by a Commissioner for oaths must be signed, stamped and the date stipulated	
2.	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by Kenya Revenue Authority in accordance with ITT 4.15.	Attach Valid Tax Compliance Certificate (Must be valid as at the date of tender Closing / Opening)	
3.	Conflict of Interest	No conflicts of interest in accordance with ITT 4.3	Form of Tender	
4.	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 4.6	Form of Tender	
5.	State- owned Enterprise	Meets conditions of ITT 4.1	Forms ELI – 1.1	
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 5.1	Forms ELI – 1.1	

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)
7.	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1st January 2021	Form CON-2	
8.	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.10	Form of Tender	
9.	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all 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 since 1st January 2021.	Form CON – 2	
11.	Tender Security	ITT 21	Form of Tender Security Provide original Tender Security in the format given. E-Tender securities are acceptable and shall be authenticated by the QR scanner	
12.	NCA practicing license	ITT 4.12	Current annual NCA Practicing License for NCA Category 5, 4, 3, 2 or 1 valid as at the date of Tender opening	
13.	Certificate of Incorporation	ITT 4.1	Provide a duly Certified Copy of Incorporation Certificate / Registration of Business Name or Partnership Deed	
14.	Power of Attorney	Form of Tender & ITT 22.4	Duly executed Power of Attorney	
15.	Form of Tender	ITT 14	Properly fill, sign and stamp the Form of Tender on the company's letter head. In addition, the following forms should be properly filled, signed and stamped	

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)
			- Confidential Business Questionnaire. - Certificate of Independent Tender Determination. - Self-Declaration of the Tenderer.	
16.	Number of participation	ITT 4.4	Tenderers including their directors will NOT be allowed to participate in more than one tender	
17.	Completeness of the tender Document	ITT 13	Submit a complete set of tender documents as per the instruction to Tenderers and also ensure that all the forms BOQ and Schedules provided in the tender documents are properly filled for completeness	
18.	Serialization of Tender Document	ITT 14.1	The Tenderer shall chronologically serialize all pages of the tender documents from cover page to the last page submitted in the format 1, 2, 3..... Following the same logical sequence. The submitted document MUST be book or tape bound	
19.	Alterations on the tender document	ITT 14.1	All alterations on the tender document MUST be signed by the authorized person.	
20.	PBC Certificate	ITT 1	The bidder shall submit a certified PBC training certificate for the Road Manager. The Road Manager of the bidding company MUST have been trained in Performance Based Road Maintenance by Kenya Institute of Highways and Building Technology (KIHBT) or any other Accredited Institution Registered in Kenya.	
Note: - All the above requirements must Be Met by the tenderer in order to proceed to the technical stage of the evaluation Process - The certifications by the commissioner for oaths MUST be original bearing the original stamp, original signature and date of certification. The certifications should not be older than one month from date of tender opening, - All forms MUST be properly filled as required, signed and stamped.				

2 Technical Evaluation Criteria

Kenya Wildlife Service 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:

TECHNICAL EVALUATION CRITERIA Part A (Experience)				
1. Item No	2. Qualification Subject	3. Qualification Requirement	4. Documents To be Completed and Submitted by the Tenderer	5. For KWS Use (Qualification)
1.	Financial Capabilities	(i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as Ksh. 4,250,000.00 net of the Tenderer's other commitments. (ii) The Tenderers shall also demonstrate, to the satisfaction of the Kenya Wildlife Service, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Kenya Wildlife Service, for the last 3 years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.	Form FIN – 3.1, with attachments The tenderer to provide sources of funding meeting the requirements in the form of:- i) Sources of Finance The tenderer to provide sources of funding meeting the requirements in the form of:- • Line of Credit (The document shall be original, referenced to the tender, and signed on the letterhead of the Financial institution offering line of credit.) • Bank Statement (Current last 6 Months from date of tender Opening/Closing and authenticated by the issuing financial institution) • Unencumbered real assets (evidence in the form of duly certified (by registered valuer / realtors) copy of: - title deed, recent Search and valuation report within the last 6 months).The real asset should be in the name of the tenderer or at least one of the directors. • Any other authorized credit facility accredited by relevant laws in Kenya (e.g. Youth fund, Sacco, Women Enterprise Fund etc.) The above sources of funding should either be cumulatively or individually equivalent to at least Ksh. 4,250,000.00 net of the Tenderer's other commitments. ii) Financial Ratio Provide fully filled signed and stamped computations of the financial ratios in Form FIN – 3.1The form to be signed by the auditor registered with ICPAK and one of the directors. Computation shall be made for the following ratios and marks awarded to each of the ratios:	Met/Not Met

TECHNICAL EVALUATION CRITERIA Part A (Experience)				
1.	2.	3.	4.	5.
Item No	Qualification Subject	Qualification Requirement	Documents To be Completed and Submitted by the Tenderer	For KWS Use (Qualification)
			- Liquidity Ratio (≥ 1) - Return on Capital Employed (ROCE) $\geq 5\%$ iii) Audited Accounts. a) Provide the above with all pages initialized and stamped by a practicing auditor registered with ICPAK and One of the directors. b) Auditor's practicing membership number must be indicated and a copy of the valid practicing license attached.	
2.	Average Annual Construction Turnover	Minimum average annual construction turnover of Ksh. 53,100,000.00 , equivalent calculated as total certified payments received for contracts in progress and/or completed within the last 3 years, divided by 3 years	Form FIN – 3.2 Attach duly certified copies of letters of Award and Completion Certificates/ Taking over Certificates for each project	Met/Not Met
3.	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 3 years, starting 1 st January 2021,	Form EXP – 4.1 Experience Attach duly certified copies of letters of Award and Completion Certificates/ Taking over Certificates for each project Experience	Met/Not Met
4.	Specific Construction & Contract Management Experience	A minimum number of Two (2) similar contracts each of minimum value Ksh. 17,000,000.00 equivalent that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1 st January 2019 and tender submission deadline.	Form EXP 4.2(a) Attach duly certified copies of letters of Award and Completion Certificates/ Taking over Certificates for each project	Met/Not Met

1.	2.	3.		4.		5.
Item No	Qualification Subject	Qualification Requirement		Documents To be Completed and Submitted by the Tenderer		For KWS Use (Qualification)
5.	Contractors key equipment	The bidder shall provide the major plants and equipment’s byfilling Form EQU. Bidder must attach evidence ofownership, Lease agreement orany rent / hiring arrangements.		Properly fill, sign and stamp <u>Form EQU</u> and submit - For Owned Equipment-Provide proof of Ownership in formof copies of NTSA TIMs Account Print Out including Log books or - For Leased equipment - Provide Lease Agreements withcopies of NTSA TIMs Account Print Out including Logbooks. - For Rented/Hired equipment-Provide Rent/Hire Agreements referenced to the tender with copies of NTSATIMs Account Print Out including Log books. For Hired equipment from Mechanical and Transport Department (MTD) of MoTIHUD-Provide a VALID letter of commitment from MTD referenced to the tender including list of specific equipment relevant to thescope of works.		Met/Not Met
	Details of Equipment required by the Tender		Minimum Number Required for the Contract Execution	No. of equipment to be made available	Date of Arrival on Project (Days after order to commence, e.g. 0,1,2,3...)	For KWS Use (Qualification)
1.	Mobile Concrete Mixers		-			
2.	Concrete Vibrator		-			
3.	6 X 4 tippers payload 16 – 20 tonnes		4			
4.	Water tankers (18,000 – 20,000lts. capacity)		1			
5.	Wheeled loaders (2m³)		1			
6.	Motor graders (93 - 205kW) – 120 HP		2			
7.	Crawler Dozer (D6 and above) or Excavator		1			
8.	Self-propelled single Flat drum vibrating (10tons)		2			
9.	Plate compactor		-			
10.	Bitumen Distributor		-			
11.	Chips Spreader		-			

TECHNICAL EVALUATION CRITERIA Part B

(i) Contractor's Representative & Key Personnel

S/No	Completeness and Responsiveness Criteria	Qualification Requirement	Key Staff			Max Scores
1	Contractor's Representative and Key Personnel	Duly filled signed and stamped Form <u>PER.1</u> and <u>PER. 2</u> in the format provided containing the following attachments: - Curriculum Vitae (CVs) of the Proposed Key Staff - Duly stamped and signed certified copies of Academic/Professional certificates and relevant testimonials. Note: The certifications by the Commissioner for oaths MUST be original bearing the original stamp, signature and the date of certification. The certifications should not be older than one month from date of tender opening.	Duly fill sign and stamp Form <u>PER. 1</u> and <u>PER. 2</u> and attach:- - copies of Academic/Professional certificates and relevant testimonials for each of the staff - Curriculum Vitae			4 Marks
			Roads Manager (SCU leader) meets criteria	Minimum Qualification Dip in Civil / Highway Eng.	3 Marks	10 Marks
				Certificate of training on Performance Based maintenance contract from KIHBT or any other Accredited Institution Registered in Kenya	4 Marks	
				Exp. 5 Yrs and above	3 Marks	
			Site Foreman meets criteria	Minimum Dip in Civil / Highway Eng.	3 Marks	6 Marks
				Exp. 5 Yrs and above	3 Marks	
			Site Surveyor meets criteria.	Minimum Dip. in Survey and above	3 Marks	6 Marks
				Exp. 3 Yrs and above	3 Marks	
			Site Agent meets criteria.	Minimum Dip. Cert in Survey and above	4 Marks	8 Marks
				Exp. 3 Yrs and above	4 Marks	

TECHNICAL EVALUATION CRITERIA Part B						
(ii) Work Methodology Evaluation Criteria						
S/No	Completeness and Responsiveness Criteria	Work Methodology Component	Detailed Requirements	Scores	Max Scores	
2	Work Execution Programme	Mobilization Management Plan	Site Lay Out Plan	2 Marks	10 Marks	
			Material Mobilization	2 Marks		
			Site Organization Chart	2 Marks		
			Equipment Management Plan	2 Marks		
			Personnel Mobilization	2 Marks		
		Quality and QuantityManagement	Methodology Statement	15 Marks	31 Marks	
			Proposals on Material Testing	8 Marks		
			Proposals on Measurements	4 Marks		
			Photographic Plan	4 Marks		
		Work Scheduling	Work Programme Charts	8 Marks	12 Marks	
			Cash Flow Plan	4 Marks		
		Work Safety Management	Traffic Control, and Accident Prevention	4 Marks	8 Marks	
			Workers Safety	4 Marks		
		Environmental and Social Management			5 Marks	5 Marks
Score Summary						
i. Contractor’s Representative & Key Personnel					34 Marks	
ii. Work Execution Programme					66 Marks	
Total Score					100 Marks	
NOTE:						
- Tenderers who do not attain the set minimum required pass mark of 80% in the TECHNICAL EVALUATION CRITERIA part B (above) will be deemed non-responsive. - Any additional information pertaining to this tender that does not fit in the standard tender forms may be printed in indelible ink on the tenderer’s stationery on its letterhead as long as it does not distort the information therein.						

3. Financial Evaluation

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

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

The Procuring Entity shall undertake an analysis of bidders' rates which are potentially lower/higher than the rates of relevant work items in the Cost Estimation Manual for Road Construction and Maintenance works (2022-2023) published by the Government of Kenya, Construction Cost Hand Book (2021) by the Ministry of Transport Infrastructure, Housing, Urban Development and Public Works and known prevailing market rates.

The bidders shall be required to demonstrate how they have derived their rates in addition to providing sufficient supporting documents within stipulated time to the Procuring Entity. The analysis of the bidder's justification shall take into account all evidences provided in response to the request and **the rates build-up guidelines provided in the Cost Estimation Manual for Road Construction and Maintenance works (2022-2023)**.

Due diligence shall be carried out by the Procuring Entity on the bidder's documentation. (See Schedule 2-SCHEDULE OF BASIC MATERIALS AND DERIVATION OF UNIT COST).

Procuring Entity shall reject the Tender if it determines that the Tenderer's bid is **Abnormally Low/ Abnormally High / Unbalanced or Front Loaded**.

SECTION IV-TENDERING FORMS

FORM OF TENDER

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

INSTRUCTIONS TO TENDERERS

- i) *All italicized text is to help the Tenderer in preparing this form.*
- ii) *The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.*
- iii) *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (t) below.*

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

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

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

To: [Insert complete name of Procuring Entity]

We, the undersigned, declare that:

- a) *No reservations:* We have examined and have no reservations to the tendering document, including Addenda issued in accordance with Instructions to Tenderers (ITT);
- b) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 4;
- c) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing Declaration or Proposal-Securing Declaration in Kenya in accordance with ITT 4.8.
- d) *Conformity:* We offer to execute in conformity with the tendering document and in accordance with the construction or service schedule the following Works:
[Insert one of the options below as appropriate]
- e) *Tender Price:* The total price of our Tender, excluding any discounts offered in item (g) below is:

Description	Amount (in numbers)
(a) Maintenance Services (PBC) in an amount of [name of currency] [amount in words].	
(b) Rehabilitation Works in an amount of [name of currency] [amount in words].	
A. SUB-TOTAL = (a) + (b)	
(c) Emergency Works in an amount of [name of currency] [amount in words].	
B. TOTAL = A + (c)	

- f) *Combined Price:* We hereby confirm that our combined price for Rehabilitation Works and Improvement Works does not exceed the threshold given in the TDS ITT 34.5 which is [insert amount or percentage of the total contract price].

Or *Tender Price*: The total price, excluding any discounts offered in item (f) below is:

Description	Amount (in numbers)
(a) Maintenance Services (PBC Works) [name of currency] [amount in words]	
(b) Rehabilitation Works [name of currency] [amount in words]	
A. SUB-TOTAL = (a) + (b) [name of currency] [amount in words]	
(c) Emergency Works [name of currency] [amount in words]	
B. TOTAL = A + (c) [name of currency] [amount in words]	

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

- i) The discounts offered are: [Specify in detail each discount offered.]
- ii) 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];

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

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

j) *One Tender per Tenderer:* We are not submitting any other Tender (s) as an individual Tenderer, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 4.4, other than alternative Tenders submitted in accordance with ITT 13;

k) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Procuring Entity. Further, we are not ineligible under Kenya laws or official regulations or pursuant to a decision of the United Nations Security Council;

l) *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 4.7];

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

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

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

executed;

- o) *Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Best Evaluated Tender or any other Tender that you may receive;*
- p) *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;*
- q) *Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the “Certificate of Independent Tender Determination” attached below.*
- r) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from _____ (specify website) during the procurement process and the execution of any resulting contract.
- s) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.
- t) We, the Tenderer, have duly completed, signed and stamped the following Forms as part of our Tender:
- a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
 - b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
 - a) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
 - b) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.
- u) Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in “Appendix 1- Fraud and Corruption” attached to the Form of Tender.

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

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

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

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

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

Name in the capacity of _____

Signed

Duly authorized to sign the Tender for and on behalf of

Dated on _____ day of _____, _____

A. TENDERER'S ELIGIBILITY - CONFIDENTIAL BUSINESS QUESTIONNAIRE

Instruction to Tenderer

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

a) Tenderer's details

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

b) Sole Proprietor, provide the following details.

Name in full _____ Age _____

Nationality _____ Country of Origin _____

Citizenship _____

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

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

i) Private or public Company_____

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

Nominal Kenya Shillings (Equivalent).....

Issued Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

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

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

If yes, provide details as follows.

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

ii) **Conflict of Interest Disclosure**

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process.		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the such Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract?		

(f) Certification

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

Full Name_____

Title or Designation_____

(Signature)

(Date)

B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

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

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

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

Name _____

Title _____

Date _____

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

C. SELF-DECLARATION FORMS

FORM SD1

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

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

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

.....
(Title)

.....
(Signature)

.....
(Date)

Bidder Official Stamp

FORM SD2

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

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

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of.....
..... (Insert name of the Company) who is a Bidder in respect of Tender No.
..... for (Insert tender title/description) for (Insert name of the
Procuring entity) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent
practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or
employees and/or agents of (Insert name of the Procuring entity) which is the procuring entity.
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any
member of the Board, Management, Staff and/or employees and/or agents of..... (Name of the
procuring entity).
4. THAT the aforesaid Bidder will not engage/has not engaged in any corrosive practice with other bidders
participating in the subject tender
5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

.....
(Title)

.....
(Signature)

.....
(Date)

Bidder's Official Stamp

D. DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

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

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

Name of Authorized signatory.....

Sign.....

Position.....

Office address.....Telephone.....

E-mail.....

Name of the Firm/Company.....

Date.....

(Company Seal/ Rubber Stamp where applicable)

Witness

Name.....

Sign.....

Date.....

E. APPENDIX 1-FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

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

2. Requirements

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

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

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

- 2.3 In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:
- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:

- i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii) “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
- iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v) “obstructive practice” is:
 - Deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - Acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
- b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

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

- c) Rejects a proposal for award¹ of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction 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, records and other documents relating to the procurement process, selection and/or contract execution, and to have the audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and
- f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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

²*Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Investigating Authority or persons appointed by the Procuring Entity to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or*

individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

Appendix to Tender Table A. 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]

Table B. Summary of Payment Currencies

For [Insert name of Section of the Works]

[Separate tables may be required if the various sections of the Works (or of the Bill of Quantities) will have substantially different foreign and local currency requirements. The Procuring Entity should insert the names of each Section of the Works.]

Name of payment currency	A Amount of currency	B Rate of exchange (local currency per unit of foreign)	C Local currency equivalent $C = A \times B$	D Percentage of Net Tender Price (NBP) $\frac{100 \times C}{NBP}$
Local currency —		1.00		
Foreign currency #1 —				
Foreign currency #2 —				
Net Tender Price				100.00
Provisional sums expressed in local currency	[To be entered by the Procuring Entity]		[To be entered by the Procuring Entity]	
Delete if not applicable: Additional provisional sums, expressed in local currency, for ESHS outcomes	[To be entered by the Procuring Entity]		[To be entered by the Procuring Entity]	
TENDER PRICE				

TECHNICAL PROPOSAL

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

SCHEDULE A. Projected Cash Flow

SCHEDULE B. Site Organizations

SCHEDULE C. Subcontractors

SCHEDULE D. Contractor's Equipment

SCHEDULE E. Initial Tentative Program of Performance

SCHEDULE F. Key Personnel Proposed

SCHEDULE G. Schedule of Basic Materials and Derivation of Unit Cost

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

SCHEDULE A

Projected Cash Flow

- 1) Tenderers shall tabulate below estimates, based on their preliminary work programme, of:
 - a) On the expenditure side, the value of the work which will be carried out;
 - b) On the revenue side, the net payments to which they will become entitled with due allowance for the advance payment and repayment, materials prepayments, and retention money, but excluding price adjustments for rise and fall and provisional sums for emergency works.
 - c) The projected net cash flow during the contract period.
- 2) The prospective successful Tenderer may be required to submit full details to substantiate his estimates.

Period (Months)	Cost of Maintenance Services	Cost of Rehabilitation and Improvement Works	Net Payments to be received	Net Cash Flow
1-6				
7-12				
13-18				
19-24				
25-30				
31-36				
37-42				
43-48				
ETC.				

SCHEDULE B

Site Organization

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

1. SITE ORGANIZATION CHART
2. NARRATIVE DESCRIPTION OF SITE ORGANIZATION CHART

SCHEDULE C

SUB-CONTRACTORS / PARTNERS

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

Part of Works / Services:

Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services:

Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services:

Approximate value:

Name and address of proposed subcontractor / partner:

Part of Works / Services:

Approximate value:

Name and address of proposed subcontractor / partner:

SCHEDULE D

Contractor's Equipment Form

EQU

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed (with a current new purchase price exceeding KSH _____, 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	
Agreements	Details of rental / lease / manufacture agreements specific to the project	

SCHEDULE E

Initial Tentative Program of Performance

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

- i) A bar chart sub-divided into sections for each road showing the major activities to be carried out for Maintenance Services, Rehabilitation Works and Improvement Works, if any. The activities shall be shown against time, with linkages shown between related/sequential activities as far as possible and appropriate.
- ii) a bar chart or schedule showing the usage of major plant, including those listed in Schedule D (Contractor's Equipment).

SCHEDULE F

FORM PER -1 Key Personnel Schedule

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

Key Personnel

Contractor' Representative and Key Personnel

1	Title of position: [Road Manager]	
	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: [Site 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: [Site 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)]

Resume and Declaration - Contractor's Representative and Key Personnel

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

[illegible]

DECLARATION

I, the under signed [.....], certify that to the Lowest of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	[insert period (start and end dates) for which site agent is available to work on this contract]
Time commitment:	[insert period (start and end dates) for which site agent is available to work on this contract]

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

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

Name of Road Manager [insert name]

Signature:_____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature:_____

Date: (day month year): _____

DECLARATION

I, the under signed [.....], certify that to the Lowest of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	[insert period (start and end dates) for which the Site Foreman is available to work on this contract]
Time commitment:	[insert period (start and end dates) for which the Site Foreman is available to work on this contract]

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

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

Name of Site Agent: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

DECLARATION

I, the under signed [.....], certify that to the Lowest of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	[insert period (start and end dates) for which the site surveyor is available to work on this contract]
Time commitment:	[insert period (start and end dates) for which the site surveyor is available to work on this contract]

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

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

Name of Site Foreman: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

DECLARATION

I, the under signed [.....], certify that to the Lowest of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	[insert period (start and end dates) for which the Site Foreman is available to work on this contract]
Time commitment:	[insert period (start and end dates) for which the Site Foreman is available to work on this contract]

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

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

Name of Site Surveyor: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

SCHEDULE G.

Schedule of Basic Materials and Derivation of Unit Cost

PART I. SCHEDULE OF MATERIALS; -BASIC PRICES

ITEM NO	DESCRIPTION	NAME OF SUPPLIER	COUNTRY OF ORIGIN	UNIT	SOURCE OF INDICE	BASE PRICE KSHS
1	Ballast			Tons		
2	Sand			Tons		
3	Timber			M ²		
4	Natural Gravel			M ³		
5	Automotive Diesel Fuel			Litres		
6	Industrial Diesel Oil			Litres		
7	Industrial Petrol Oil			Litres		
8	Kerosene Fuel			Litres		
9	Cement			Tons		
10	Lime			Tons		
11	Flex beam Guardrail			Meter		
12	Gabion Mesh			M ²		
13	Reinforcing Steel			Tons		
14	A142			M ²		
15	Rock Filling			M ³		
16	Concrete Pipes			M		

- (a) The prices inserted above shall be those prevailing 30 days before the submission of Tenders and shall be quoted in Kenya Shillings using the prevailing exchange rates by Central Bank Kenya.
- (b) Prices of imported materials to be quoted CIF Mombasa or Nairobi as appropriate depending on whether materials are imported by the tenderer directly or through a local agent.
- (c) Only sources of indices that publish data to the public and are freely accessible to the Employer shall be used. Reference prices are not acceptable as sources of indices.
- (d) Sources of indices must be supported by copies of relevant data from acceptable and verifiable sources.
- (e) Base values and dates must be supported by copies of such data as above

PART II. SCHEDULE OF MATERIALS; -BASIC PRICES

Form for Detailed Breakdown of Cost Comparison					
Bill item No.					
Description					
Units					
Quantity					
Rate build up	i) Unit work Price	1) Material Cost			
<i>a) Direct cost (DC)</i>					
		Description	Units	Quantity	Mark et Price
		Sub Total For Material			
		2) Labor Price			
		Personnel	No. Required	Rate/day	Amount
		Sub Total For Labor			
		Productivity ratio			
		3) Machinery			
		Machinery type	No. Required	Rate /day	Amount
					Hired/Owned
		Sub Total for Machinery			
		Productivity ratio			
		Sub-total of unit price			
		Sum (1+2+3)			
Sub-totals of DC	ii) Haulage Cost				
<i>b) Indirect Cost</i>					
<i>c) Overheads and Profits</i>					
Total Cost					
Sum (a+b+c)					

Notes:

This form is based on first principles developed as guided by the 3rd Revised Edition of Cost Estimation Manual 2022-2023. The form shall be filled upon request by the Procuring Entity during Tender Evaluation.

I certify that the above information is correct

(Signature)

(Date& Official Stamp)

TENDERER'S QUALIFICATION FORMS

Form ELI -1.1

Tenderer Information Form

Date: _____

ITT No. and title: _____

Page _____ of _____ pages

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 4.1 ☐ In case of JV, Form of intent to form JV or JV agreement, in accordance with ITT 4.1 ☐ In case of state-owned enterprise or institution, in accordance with ITT 4.7 documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart and a list of Board of Directors.

Tenderer's JV Information Form

(To be completed for each member of Tenderer's JV)

Date: _____

ITT No. and title: _____

Page _____ of _____ pages

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 4.1. ☐ 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 4.7. 2. Included are the organizational chart and a list of Board of Director.

Form ELI - 1.3

Qualification of Foreign Tenderers

Pursuant to ITT 4.10, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition (the 40% Rule).

ITEM	Description of Work Item	Describe location of Source	COST in K. shillings	Comments, if any
A	Local Labor			
1				
2				
3				
4				
5				
B	Sub contracts from Local sources			
1				
2				
3				
4				
5				
C	Local materials			
1				
2				
3				
4				
5				
D	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
E	Add any other items			
1				
2				
3				
4				
5				
6				
7				
	TOTAL COST LOCAL CONTENT		xx	
	PERCENTAGE OF CONTRACT PRICE		xx	

Disclosure of Interest – Interest of the Firm in the Procuring Entity (this form is already attached to the Form of Tender).

Form CON – 1

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____ Date: _____

_____ JV

Member's Name _____ ITT

No. and title: _____

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria
☐ Contract non-performance did not occur since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.

☐ Contract(s) not performed since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1

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

Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements
☐ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, 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 (Kenya Shilling equivalent)
		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 (Kenya Shilling equivalent)
---------------	------------------------------------	-------------------------	---

Form FIN – 3.1:**Financial Situation and Performance**

Tenderer's Name: _____

Date: _____ JV

Member's Name _____

ITT No. and title: _____

Financial Data

Type of Financial information in _____ (Kenya Shillings)		Historic information for previous 3 years, (amount in Kenya Shillings)		
		Year 1	Year 2	Year 3
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				
Financial Ratios	Current Ratio			.
	Liquidity Ratio			
	Return on Capital Employed (ROCE)			

Registered Auditor Name: _____

Practicing Number: _____

Signature & Stamp: _____

Date: _____

Director Name: _____

Signature & Stamp: _____

Date: _____

1. 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		

2. Financial documents

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

- a) Reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
- b) Be independently audited or certified in accordance with local legislation.
- c) Be complete, including all notes to the financial statements.
- d) Correspond to accounting periods already completed and audited.

Attached are copies of financial statements¹ for the_____years required above; and complying with the requirements

Form FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____

Date: _____ JV

Member's Name _____

ITT No. and title: _____

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

* See Section III, Evaluation and Qualification Criteria.

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

Form FIN - 3.4:**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 Form of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

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

Form EXP - 4.1**General Construction Experience**

Tenderer's Name: _____

Date: _____ JV

Member's Name _____

ITT No. and title: _____

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

Form EXP - 4.2(a)**Specific Construction and Contract Management Experience**

Tenderer's Name: _____ Date: _____

JV Member's Name _____ ITT No. and title: _

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

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 and Services items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Form EXP - 4.2(b)**Construction Experience in Key Activities**

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

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

ITT No. and title: _____

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

1. Key Activity No: ____

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 5				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

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

FORM OF TENDER SECURITY-

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

Beneficiary: _____

Request for Tenders No: _____

Date: _____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (herein after called "the Tender") for the execution of _____ under Request for Tenders No. _____ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
 - (a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
 - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[signature(s)]

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

2. FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

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

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

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

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

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

[Date]

[Witness]

[Signature of the Guarantor]

[Seal]

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

3. FORM OF TENDER-SECURING DECLARATION

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

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

Tender No.:..... [Insert number of tendering process]

To:..... [Insert complete name of Purchaser]

I/We, the undersigned, declare that:

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

Signed:.....

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

Name:..... Duly

authorized to sign the bid for and on behalf of: [insert complete name of Tenderer] Dated

on..... day of..... [Insert date of signing]

Seal or stamp

PART 2 – WORKS AND SERVICES' REQUIREMENTS

BILLS OF QUANTITIES

The tender includes the following Bills of Quantities:

- i) Bills of Quantities for Maintenance Services
- ii) Bills of Quantities for Rehabilitation Works (if those are required under the contract)
- iii) Bills of Quantities for Improvement Works (if those are required under the contract)
- iv) Bills of Quantities for Emergency Works

A. Bills of Quantities for Maintenance Services

1. The Bills of Quantities for Maintenance Services shall be read in conjunction with the Instructions to Tenderers, Conditions of Contract, Specifications and the Drawings.
2. This Bills of Quantities is the basis for payment of maintenance services that are to be provided on a lump sum per km basis for maintaining the roads covered under the contract, at the Service Levels defined in the Specifications. The rates given by the Tenderer shall, except insofar as is otherwise provided under the Contract, include all plant, equipment, labour, management and supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
3. Payment shall be made in accordance with the actual performance of the Contractor and compliance with the Service Level criteria given in the Specifications for each road. Failure to meet the Service Levels will result in payment reductions in accordance with Clause 47 of the General Conditions and the Performance Specifications.
4. The unit rates and prices shall be quoted entirely in local currency but payment will be made in the proportions and currencies quoted in the Schedule of Adjustment Data.
5. A unit rate or price shall be entered by the Tenderer against each item in the Bill of Quantities. The cost of items against which the Tenderer has failed to enter a unit rate or price shall be deemed to be covered by other unit rates and prices entered in the Bill of Quantities.
6. General directions and descriptions of work and materials are not repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
7. The method of measurement of completed work for payment shall be in accordance with the measurement and payment provisions of the relevant section in the Performance Specifications.
8. Arithmetical errors discovered prior to award of the Contract will be corrected by the Procuring Entity pursuant to the Instructions to Tenderers.

Bill of Quantities and Unit Prices for Maintenance Services

[To be completed by the tenderer]

TENDER NO. KWS/ONT/RMLF/114/2023-2024					
PERFORMANCE BASED MAINTENANCE WORKS					
I. JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM					
Item	Description	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
Bill No. 4: Site Clearance/Vegetation Control					
04-50-004	<u>Light Bush clearing:</u> Cut grass from shoulders, slopes, inlet ditches, and side ditches including back slopes turnouts and culvert outlets	M ²	25,000.00		
04-50-008	<u>Clearing of obstruction:</u> Clear any obstruction including debris or boulders out of the road carriageway.	M ²	200.00		
Bill No. 5: Earth works					
05-50-006	Fill in hard material and compact	M ³	80.00		
Bill No. 8: Culverts and Drainage Works					
08-50-002	<u>Ditch cleaning</u> Desilt, grade to shape inlets and outfalls, side drains/catch water drains to free flow.	M	4,640.00		
08-60-003	Culvert Cleaning- Partially blocked - 600mm	M	324.00		
08-60-004	Culvert Cleaning- Partially blocked - 900mm	M	42.00		
08-60-192	Headwall Repair to specifications	NO	5.00		
Bill No. 10: Grading and Graveling Works.					
10-50-003	<u>Light grading as instructed by the Engineer</u> Trim with motor grader existing carriageway to camber, including slopes and ditches	M ²	260,000.00		
10-60-001	<u>Gravel patching</u> Provide gravel wearing course- excavation, free haul, spread, water and compact gravel to specifications	M ²	250.00		
	Total Performance Based Maintenance Works				
Duration of the PBC Contract (months)		12	Cost/Month		
Length of Road/s (km)		23.2	Cost/Month/km		

Description of Service and Price			
This price is the remuneration to the Contractor (Exclusive of VAT) to carry out the services and works required in order to reach and maintain the service levels described in the Specifications and elsewhere in the contract. It further includes the activities of the Contractor related to self -control, quality assurance and material testing.			
The Unit Price (Exclusive of VAT) per month and kilometer is			
S/No	Road Name	Length (Km)	Unit Price (Ksh.)
1	Junct 7 -Hippo pools-Athi Basin-Junct 10 Road (UNCL_NNP_7) Main Gate-Junct 2 Road (UNCL_NNP_4)	23.2	
Total Unit Price Per Month Per Kilometer			
<i>[Note: There may be either one unit price for all roads or road sections included in the contract, or different prices for different roads].</i>			

TENDER NO. KWS/ONT/RMLF/114/2023-2024					
PERFORMANCE BASED MAINTENANCE WORKS					
II JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9), 2.5 KM					
Item	Description	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
Bill No. 4: Site clearance/Vegetation control					
04-50-004	<u>Light Bush clearing:</u> Cut grass from shoulders, slopes, inlet ditches, and side ditches including back slopes turnouts and culvert outlets	M ²	4,000.00		
04-50-008	<u>Clearing of obstruction:</u> Clear any obstruction including debris or boulders out of the road carriageway.	M ²	50.00		
Bill No. 5: Earth works					
05-50-006	Fill in hard material and compact	M ³	50.00		
Bill No. 8: Culverts and Drainage Works					
08-50-002	<u>Ditch cleaning</u> Desilt, grade to shape inlets and outfalls, side drains/catch water drains to free flow.	M	6,000.00		
08-60-003	Culvert Cleaning- Partially blocked - 600mm	M	36.00		
08-60-192	Headwall Repair to specifications	NO	2.00		
Bill No.10: Grading and Gravelling Works.					
10-50-003	<u>Light grading as instructed by the Engineer</u> Trim with motor grader existing carriageway to camber, including slopes and ditches	M ²	15,000.00		
10-60-001	<u>Gravel patching</u> Provide gravel wearing course- excavation, free haul, spread, water and compact gravel to specifications	M ²	350.00		
	Total Performance Based Maintenance Works				
Duration of the PBC Contract (months)		12	Cost/Month		
Length of Road/s (km)		2.5	Cost/Month/km		

Description of Service and Price			
This price is the remuneration to the Contractor (Exclusive of VAT) to carry out the services and works required in order to reach and maintain the service levels described in the Specifications and elsewhere in the contract. It further includes the activities of the Contractor related to self -control, quality assurance and material testing.			
The Unit Price (Exclusive of VAT) per month and kilometer is			
S/No	Road Name	Length (Km)	Unit Price (Ksh.)
2	Junct 7 – East Gate Road (UNCL_NNP_9)	2.5	
Total Unit Price Per Month Per Kilometer			
<i>[Note: There may either be one unit price for all roads or road sections included in the contract, or different prices for different roads].</i>			

B Bill of Quantities for Rehabilitation and Improvement Works

1. The Bills of Quantities for Rehabilitation Works and for Improvement Works shall be read in conjunction with the Instructions to Tenderers, Conditions of Contract, Specifications and the Drawings.

Bill of Quantities for Rehabilitation Works

2. The Bill of Quantities for Rehabilitation Works presents a number of explicit activities considered necessary to rehabilitate particular road sections before some or all of the Service Level criteria for performance-based maintenance defined in the Specifications can be applied. The Tenderer shall undertake a detailed assessment of road conditions at the time of Tender. The location and extent of the particular rehabilitation works considered necessary to reach required Service Levels shall be indicated by the Tenderer in his Tender submission.
3. Although the tendering document may show estimated quantities of Rehabilitation Works, it is the responsibility of the Tenderer to prepare his own estimate for the quantity of work required for each rehabilitation activity, and he shall indicate these quantities in the Bill of Quantities.
4. The Procuring Entity may in some cases indicate fixed quantities for some specific Rehabilitation Works, such as asphalt resurfacing. Those cases are clearly indicated as such by the Procuring Entity in the TDS Specifications and the Bill of Quantities for Rehabilitation Works.
5. Payment for Rehabilitation Works shall be made in relation to the work outputs satisfactorily completed in conformity with the Specifications as measured by the Contractor and verified by the Engineer, and valued at the unit rates and prices stated in the priced Bill of Quantities. The total price for Rehabilitation Works and Improvement Works, if any, shall not exceed the threshold value or percentage given by the Procuring Entity in the TDS.

Bill of Quantities for Improvement Works

6. The Bill of Quantities for Improvement Works lists a set of interventions to be carried out by the contractor that add new characteristics to the Road in response to existing or new traffic, safety or other conditions, as defined in the TDS and the Specifications.
7. Payment for Improvement Works shall be made in relation to the work items satisfactorily completed in conformity with the Specifications, as measured by the Contractor and verified by the Engineer, and valued at the unit rates and prices stated in the priced Bill of Quantities for Improvement Works.

General

8. The unit rates and prices Tender in the priced Bill of Quantities shall, except insofar as is otherwise provided under the Contract, include all plant, equipment, labor, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract. Unit rates and prices shall also include the cost of engineering design services, and measures needed to prevent or mitigate environmental impacts and safety measures.
9. The unit rates and prices shall be quoted entirely in local currency but payment will be made in the proportions and currencies quoted in the Schedule of Adjustments.
10. A quantity, unit rate or price shall only be entered against those work items considered necessary to attain the required Service Levels and sustain such Service Levels thereafter through execution of maintenance services that are provided for separately.
11. General directions and descriptions of work and materials are not repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
12. The method of measurement of completed work for payment shall be in accordance with the measurement and payment provisions of the relevant section of the Specifications.
13. Arithmetical errors discovered prior to award of the Contract will be corrected by the Procuring Entity pursuant to the Instructions to Tenderers.

Bill of Quantities for Rehabilitation Works

TENDER NO. KWS/ONT/RMLF/114/2023-2024					
REHABILITATION WORKS					
I. JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM					
Item	Description of Work Item	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
01-80-026	Allow a prime cost sum for the REs miscellaneous account	PC SUM	1.00	20,000.00	20,000.00
01-80-027	Extra over 01-80-026 for profits and overheads	%	20,000.00		
01-80-028	Allow a prime cost sum for off road Environmental Mitigation	PC SUM	1.00	30,000.00	30,000.00
01-80-029	Extra over 01-80-028 for profits and overheads	%	30,000.00		
01-80-034	Allow a prime cost sum for HIV/AIDS awareness on site	PC SUM	1.00	10,000.00	10,000.00
01-80-035	Include percentage of PC sum in item 01-80-034 for contractors overhead and profit	%	10,000.00		
01-80-010	Allow a PC sum for material testing as directed by Engineer	PC SUM	1.00	50,000.00	50,000.00
01-80-011	Extra over 01-80-011 for profits and overheads	%	50,000.00		
01-60-002	Provide with driver and maintain one (1) 2.5 litre 4-wheel drive double cab vehicle (in good condition) or similarly approved with all relevant security and safety features for the exclusive use of the Engineer's representative. The vehicle is subject to approval by the Engineer.	Vehicle- Month	12.00		
10-50-002	Heavy grading with watering and compaction	M ³	138,000.00		
10-60-003	Provide gravel wearing course-excavation, free haul, spread, water and compact gravel to specifications.	M ³	3,000.00		
	Total carried to Summary page				

TENDER NO. KWS/ONT/RMLF/114/2023-2024

REHABILITATION WORKS

II. JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9), 2.5 KM

Item	Description of Work Item	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
01-80-026	Allow a prime cost sum for the REs miscellaneous account	PC SUM	1.00	20,000.00	20,000.00
01-80-027	Extra over 01-80-026 for profits and overheads	%	20,000.00		
01-80-028	Allow a prime cost sum for off road Environmental Mitigation	PC SUM	1.00	40,000.00	40,000.00
01-80-029	Extra over 01-80-028 for profits and overheads	%	40,000.00		
01-80-034	Allow a prime cost sum for HIV/AIDS awareness on site	PC SUM	1.00	10,000.00	10,000.00
01-80-035	Include percentage of PC sum in item 01-80-034 for contractors overhead and profit	%	10,000.00		
10-60-003	Provide gravel wearing course-excavation, free haul, spread, water and compact gravel to specifications.	M ³	942.36		
	Total carried to Summary page				

C Bills of Quantities for Emergency Works

GENERAL

1. The Bill of Quantities for Emergency Works shall be read in conjunction with the Instructions to Tenderers, Conditions of Contract, Specifications and the Drawings.
2. The quantities given in the Bill of Quantities are hypothetical and provisional, and are given to provide a common basis for Tendering. Actual quantities for Emergency Works will be specified in Work Orders, issued by the Engineer in accordance with the General Conditions. The basis of payment for Emergency Works will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the unit rates and prices Tender in the priced Bill of Quantities, where applicable, and otherwise at such unit rates and prices as may be agreed or determined by the Engineer under the provisions of the Contract.
3. The unit rates and prices Tender in the priced Bill of Quantities shall, except insofar as is otherwise provided under the Contract, include all plant, equipment, labour, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The unit rates and prices shall be quoted entirely in local currency, but payment will be made in the proportions and currencies quoted in the Schedule of Adjustments.
5. A unit rate or price shall be entered against each item in the Bill of Quantities. The cost of items against which the Contract or has failed to enter a unit rate or price shall be deemed to be covered by other unit rates and prices entered in the Bill of Quantities.
6. General directions and descriptions of work and materials are not repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
7. The method of measurement of completed work for payment shall be in accordance with the measurement and payment provisions of the relevant section of the Specifications.
8. Arithmetical errors discovered prior to award of the Contract will be corrected by the Procuring Entity pursuant to ITT 31

Bill of Quantities for Emergency Works**TENDER NO. KWS/ONT/RMLF/114/2023-2024****EMERGENCY / DAY WORKS****I.JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM****PLANT AND EQUIPMENT**

The rates included herein are to include all operational and maintenance costs, fuel, oil, grease, operator charges, wages, supervision, overheads and profits. Only time employed upon the work will be measured and the rates shall include for idle time spent travelling and overtime in accordance with section 22 of the specifications. All items of the plant and Equipment must be priced.

Item	Description of Work Item	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
22-50-151	Motor grader complete with scarifier: a- 80-110kw rated flywheel power	HR	12.00		
22-50-190	Rollers, vibratory single drum, rubber tyred, self-propelled 8.3t - 10.5t unballasted weight	HR	12.00		
22-50-072	Compressor rated by normal delivery of free air per min at about 7kg/cm ² , complete with all tools, hoses, steel etc: b- 7.5-19.7 m ³ /min	HR	4.00		
22-80-002	Crawler dozers with dozers and hydraulic attachment (a) 136 - 185kw rated fly wheeled power	HR	6.00		
22-67-001	Pump Water/Mud: 100 mm.	HR	5.00		
22-50-083	Craw loaders: b-1.31-1.90m ³ SAE rated capacity	HR	6.00		
22-65-003	Concrete Mixer: 300 - 450 L	HR	5.00		
22-80-020	Poker vibrator for concrete diesel	HR	5.00		
22-61-009	Truck, Tipper: 15 Tonnes	HR	24.00		
22-80-025	Water tanker/bowser self-propelled 5000-10000 lts capacity	HR	8.00		

TENDER NO. KWS/ONT/RMLF/114/2023-2024

JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM

*Cont'd...***II EMERGENCY / DAY WORKS**

LABOUR

Note: The rate included herein shall include all costs of labour as well as overtime, travelling time and cost of accommodation, social security contributions, use and maintenance of small tools of trade, supervision insurance, overheads, profits and any other cost.

Item	Description of Work Item	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
22-50-002	Unskilled Labour	PD	20.00		
22-50-040	Artisan	PD	8.00		
22-90-029	Labour c) Plant operator	PD	8.00		
22-50-015	Driver Assistant (Turn boy)	PD	8.00		
22-90-030	Labour d) Driver	PD	8.00		
22-90-031	Labour e) Foreman.	PD	8.00		
22-90-032	Labour f) Site surveyor.	PD	8.00		

MATERIALS

All items of materials must be priced in accordance with the requirements of section 2202 of the standard specification

22-70-008	Shuttering timber class F1 finish	M ²	15.00		
22-70-009	Shuttering timber class F2 finish	M ²	15.00		
22-50-127	High yield Steel Reinforcement -Up to and including 16mm diameter	Ton	0.50		
22-70-005	Cement (Ordinary Portland)	Ton	2.00		
22-70-001	Fine aggregates(sand)	Ton	16.00		
22-70-003	Graded aggregates (ballast)	Ton	8.00		
22-72-003	Precast concrete culvert - 600mm	M	6.00		
22-72-004	Precast concrete culvert - 900mm	M	6.00		
22-72-023	Hardcore	M ³	8.00		
22-72-022	Gravel material (Murram)	M ³	24.00		
22-77-005	Weld mesh BRC A142	M ²	50.00		
22-77-006	Binding wire	KG	20.00		
22-50-113	Gabion box 2 x 1 x 1m	M ²	20.00		
	Total Emergency Works/Day Works Carried to Summary				

TENDER NO. KWS/ONT/RMLF/114/2023-2024**EMERGENCY / DAY WORKS****II. JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9), 2.5 KM****PLANT AND EQUIPMENT**

The rates included herein are to include all operational and maintenance costs, fuel, oil, grease, operator charges, wages, supervision, overheads and profits. Only time employed upon the work will be measured and the rates shall include for idle time spent travelling and overtime in accordance with section 22 of the specifications. All items of the plant and Equipment must be priced.

Item	Description of Work Item	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
22-50-151	Motor grader complete with scarifier: a-80-110kw rated flywheel power	HR	6.00		
22-80-025	Water tanker/bowser self-propelled 5000-10000 lts capacity	HR	6.00		

LABOUR

Note: The rate included herein shall include all costs of labour as well as overtime, travelling time and cost of accommodation, social security contributions, use and maintenance of small tools of trade, supervision insurance, overheads, profits and any other cost.

Item	Description	Unit	Nominal Quantity	Rate (Ksh.)	Amount (Ksh.)
22-50-002	Unskilled Labour	PD	10.00		
22-50-040	Artisan	PD	5.00		
22-90-029	Labour c) Plant operator	PD	2.00		
22-50-015	Driver Assistant (Turn boy)	PD	2.00		

MATERIALS

All items of materials must be priced in accordance with the requirements of section 2202 of the standard specification

22-72-023	Hardcore	M ³	20.00		
22-72-022	Gravel material (murrum)	M ³	20.00		
	Total Emergency Works/Day Works Carried to Summary				

TENDER NO. KWS/ONT/RMLF/114/2023-2024		
Summary Page		
Description of Work Item	Road Name	Amount (Kshs.)
PERFORMANCE BASED MAINTENANCE WORKS	JUNCT 7 -HIPPO POOLS-ATHI BASIN- JUNCT 10 ROAD (UNCL_NNP_7)	
	JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9)	
(I) Sub-Total for Performance Based Maintenance Works		
(II) Add 16% VAT		
(a) Total for Performance Based Maintenance (I+II) carried Forward to Form of Tender		
REHABILITATION WORKS	JUNCT 7 -HIPPO POOLS-ATHI BASIN- JUNCT 10 ROAD (UNCL_NNP_7)	
	JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9)	
(I) Sub-Total for Rehabilitation Works		
(II) Add 16% VAT		
(b) Total for Rehabilitation Works (I+II) carried Forward to Form of Tender		
EMERGENCY / DAY WORKS	JUNCT 7 -HIPPO POOLS-ATHI BASIN- JUNCT 10 ROAD (UNCL_NNP_7)	
	JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9)	
(I) Sub-Total for Emergency / Day Works		
(II) Add 16% VAT		
(c) Total for Emergency / Day Works (I+II) carried Forward to Form of Tender		

SECTION V A STANDARD SPECIFICATIONS

The contractor must familiarize himself with General specification for Road works as contained in.

1. Standard Specification for Road and Bridge Construction.
Published by the Ministry of Transport and Communications of the Republic of Kenya, 1986.
2. Road Maintenance Manual, Published by Ministry of Roads.
3. Performance Based Road Maintenance Contract (PBC) Guideline, Edition 1.1, published by Japan International Co-operation Agency (JICA), 2016.
4. Manuals and Guidelines.

Manuals and Guidelines are supplementary to the General Specifications, Performance Specifications and Standard Specifications. In particular, they provide a standard methodology to implement the works and services in order to comply with the requirement in the contract and not limited to;

- i) Road Maintenance Manual, Ministry of Roads, 2010
- ii) Performance Based Road Maintenance Contract (PBC) Guideline, JICA, 2016
- iii) Proposed manual for Traffic Signs in Kenya, June

1975; Part I, Road Markings

Part II, Manual for Traffic Signs in Kenya

Work shall be carried out in accordance with the Standard Specification except as supplemented, modified or revised in the Special Specification.

SECTION V B: SPECIAL SPECIFICATIONS (PBC WORKS)

1. Introduction on Service Level Categories Levels of Category

Based on the study of current service levels applied by the road authorities, four (4) standard service level categories cover road network in Kenya. The principal factors considered in the selection of service levels are road type and traffic volume. However, specific road characteristics, such as climatic conditions, road function and terrain, may also be considered. Two service levels (High and Standard) are for paved roads and another two service levels (High and Standard) for un-paved roads.

The Service Levels should be selected from Table 1.1 according Annual Average Daily Traffic Volume (AADT).

Table 1.1. Service Level Categories Adopted

Road Type	Paved		Un-Paved	
Service Level Category	High	Standard	High	Standard
Annual Average Daily Traffic Volume	More than 20,000 vpd	Less than 20,000 vpd	More than 500 vpd	Less than 500 vpd

Note: vpd – vehicles per day

Note that Table 1.1 shows indicative traffic volume of service level category. The Road Authority need to define service level based not only on traffic but also on road class, climate and road complexity.

1.1. Service Criteria

Selection of Standard Service Level Category is made based on the road type (Paved or Unpaved), the traffic volume, as well as road conditions assessment.

The Table 1.2 below shows the list of service criteria under each Service Category and Service Scope.

Table 1.2. List of Service Criteria

Service Category	Service Scope	Elements-Paved Road	Elements-Unpaved Road
Road Usability	Passability	Pavement	Pavement.
Road User Comfort	Smooth and Safe Traffic	Pavement	Pavement
		Shoulder	Shoulder
		Median	Footpath
		Footpath/ Cycle way	
		Footbridge	
	Visibility	Sight Distance Availability	Sight Distance Availability
		Street Lighting	
	Traffic Information	Signage	Signage
		Road Works advance warning signs	Road Works advance warning signs
		Road Marking	
Road Durability	Drainage Capability	Side Drains, Mitres Drains, Cut off Drains(Lined)	Side Drains, Mitres Drains, Cut off Drains
		Side Drains, Mitres Drains, Cut off Drains(Unlined)	
		Culverts and Drifts	Culverts and Drifts
		Scour checks, gabions and other erosion protection Structures	Scour checks, gabions and other erosion protection Structures
		Manholes and gulley pots	
	Vegetation Control	Vegetation free zone	Vegetation free zone
		Inner vegetation zone	Inner vegetation zone
		Overhanging branches	Overhanging branches
	Maintenance of other structures	Concrete structures	Concrete structures
		Steel structures	Steel structures
		Bridge expansion joints	Bridge expansion joints
		Guardrail/Pedestrian rail	Guardrail/Pedestrian rail

Service Category	Service Scope	Elements-Paved Road	Elements-Unpaved Road
	Slope Stability	Riverbeds	Riverbeds
		Embankment Slopes	Embankment Slopes
		Slopes in Cuts	Slopes in Cuts

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Service Level Category	High	Standard	High	Standard
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Note: vpd – vehicles per day

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		Footpath/ Cycleway	
		Footbridge	
	Visibility	Sight Distance Availability	Sight Distance Availability
		Street Lighting	
	Traffic Information	Signage	Signage
		Road Works advance warning signs	Road Works advance warning signs
		Road Marking	
Road Durability	Drainage Capability	Side Drains, Mitres Drains, Cut off Drains(Lined)	Side Drains, Mitres Drains, Cut off Drains
		Side Drains, Mitres Drains, Cut off Drains(Unlined)	
		Culverts and Drifts	Culverts and Drifts
		Scour checks, gabions and other erosion protection Structures	Scour checks, gabions and other erosion protection Structures
		Manholes and gulley pots	
	Vegetation Control	Vegetation free zone	Vegetation free zone
		Inner vegetation zone	Inner vegetation zone
		Overhanging branches	Overhanging branches
	Maintenance of other structures	Concrete structures	Concrete structures
		Steel structures	Steel structures
		Bridge expansion joints	Bridge expansion joints
		Guardrail/Pedestrian rail	Guardrail/Pedestrian rail
		Riverbeds	Riverbeds
	Slope Stability	Embankment Slopes	Embankment Slopes
		Slopes in Cuts	Slopes in Cuts

2 Description of the Road

The project is located in **NAIROB NATIONAL PARK** consisting of the following roads to ETB standard:

- JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM
- JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9, 2.5KM

3 Works and Services to be provided

3.1 Works

The Works are what the Contract requires the Contractor to construct, install, and turnover to the Employer, as covered under Rehabilitation Works, Improvement Works and Emergency Works.

3.1.1 Rehabilitation Works

Rehabilitation Works are a set of measurable inputs to be executed by the Contractor during the Initial Mobilization Period to allow the Road to achieve the performance standards required under the contract. Rehabilitation Works shall be carried out by the Contractor in accordance with the Bill of Quantities. Rehabilitation Works will be paid for as measured items in accordance with the unit rates in the Bill of Quantities.

3.1.2 Improvement Works

Improvement Works are a set of interventions to be executed by the Contractor to allow the Road to acquire new characteristics under the contract. Improvement Works shall be carried out by the Contractor when specifically instructed by the Engineer as set out in Clause 27 of GCC and in accordance with the Bill of Quantities. Improvement Works will be paid for as measured items in accordance with the unit rates in the Bill of Quantities.

3.1.3 Emergency Works

Emergency Works are a set of necessary inputs to be executed by the Contractor to allow the Road to be reinstated under the contract in case of inflicted damages as a result of natural phenomena with imponderable consequences, such as strong storms, flooding and earthquakes. Emergency Works shall be carried out by the Contractor when specifically instructed by the Engineer as set out in Clause 27 of GCC and in accordance with the unit rates provided for in the Specifications.

In the event of an emergency, the Contractor shall draw to the attention of the Engineer that certain works need to be carried out to reinstate the carriageway and other road features to restore the safe passage of traffic and ensure the integrity of the Road.

The Engineer who will determine the quantities of activities to reinstate the roads, shall make the payments according to the measured works.

3.1.4 Design Responsibility for Works

All Works, Rehabilitation Works, Improvement Works and Emergency Works shall be designed by the Employer in accordance with the latest specifications adopted by the Employer.

3.2 Maintenance Services

Maintenance Services to be provided by the Contractor include all activities, physical and others, which the Contractor needs to carry out in order that specific road related assets and items comply with the Road Performance Standards as defined by the Service Levels and other output and performance criteria indicated in the contract, or with any other requirements of the contract. In particular, they include management tasks and physical works associated with the following road-related assets and items:

[Note: List the extent of specific road related assets and items that are to be maintained under the contract. The list of assets and items may include:

- 1) Pavements (paved roads)

- 2) Shoulders
- 3) Footpaths/cycle ways
- 4) Road embankments and slopes
- 5) Bridges
- 6) Drainage system
- 7) Vegetation
- 8) Riverbeds
- 9) Road furniture
- 10) Other road related structures
- 11) Traffic Management
- 12) Data collection Maintenance service delivery outputs

During the entire contract period, the Contractor is expected to achieve the following outcomes:

1. No potholes on any part of the Project road
2. No side drains and/or culverts on the Project roads shall be blocked, silted or damaged
3. No standing water on the project road
4. No road furniture on the Project road is missing
5. The road is safe to all users
6. No defects on the project road
7. No road section length shall be unavailable

For guidance, the activities to be undertaken by the Contractor include, but are not limited to, management tasks and physical works associated with the following:

1. Inspect the road for safety defects and defects likely to impact on durability of the assets
2. Inspect road, identify and remove all obstructions
3. Clean drainage (side drains, culverts)
4. Repair and replace scour checks
5. Vegetation control, grass cutting, bush clearing, tree pruning
6. Maintain bridges and minor repairs (replacement of guardrails)
7. Maintain road furniture and replace damaged traffic signs

The Contractor shall prepare and submit Routine Maintenance strategy for approval by Engineer.

Management tasks and physical works include, but not limited to the following;

[Note: List the management tasks and physical works that are to be provided by the Contractor under the contract. The list may include:

- 1) Maintain road usability
- 2) Maintain road user comfort
- 3) Maintain road durability
- 4) Maintain control of the Road by patrolling, data collection, conducting inspections and reporting

Maintenance Services shall be paid for as a fixed lump sum per km per month, with payment reductions made for non-compliance, if appropriate.

4. Compliance with Service Level Requirements

The Initial Mobilization Period for the Road to be brought to Service Level requirements is 3 months after the issuance of the Actual Start Date by the Contractor. However, the period should vary depending on the initial condition of the road as defined and specified in the SCC. In the Contract. Within the first 3 months, compliance with the Service Levels will be adjusted as shown in Table 3.1 to allow the Contractor to properly mobilize the team within the Initial Mobilization Period.

Table 4.1 Timetable for Compliance with Service Level Requirements

Contract Month	Road Usability Compliance required on % of contract road	Road User Comfort Compliance required on % of contract road	Road Durability Compliance required on % of contract road
1	50	50	50
2	100	75	75
3	100	100	100
Until end of Contract	100	100	100

5. Programme of Performance

In accordance with clause 17.2 of the General Conditions of Contract (GCC), the Contractor shall submit a Program of Performance within twenty-eight (28) days after the signing the contract agreement. The program shall include, but not be limited, to the following items:

5.1 Contractor's Quality Assurance Plan

The purpose of the Contractor's Quality Assurance Plan is to integrate the requirements of the contract and the Contractor's quality assurance systems to deliver the Works and Services.

The Contractor's Quality Assurance Plan describes the methods and procedures which the Contractor will apply for the execution of the Contract, including how the Contractor will:

- Identify the quality requirements specific to the contract,
- Plan and execute the Works and Services to satisfy those requirements
- Inspect and/or test the Works and Services to ensure compliance with the quality requirements
- Record and monitor the results as evidence of compliance, and
- Ensure that prompt action is taken to correct non-compliance.

The Contractor's Quality Assurance Plan must clearly describe the systems, procedures and methods that will be used to deliver and monitor compliance of the Works and Services.

5.2 Traffic Management Plan

If required in the Special Conditions of Contract (SCC) the Program of Performance shall include a Traffic Management Plan. The Traffic Management Plan establishes the practices for traffic management at work sites. The Traffic Management Plan must be developed by the Contractor and agreed with the Engineer.

The objectives of the Traffic Management Plan are to:

- clearly define and document the responsibilities and chain of command for the development, implementation and management of traffic control measures and systems
- establish the minimum requirements for temporary traffic control
- establish the minimum geometric, cross section and surfacing standards for temporary works
- provide appropriate transitions and enable safe and efficient traffic flow into, through and out of work sites
- protect the Contractor's personnel at all times
- protect the Assets and the Contractor's resources at all times.
- Meet the operational requirements for the road

The Traffic Management Plan must include at least the following:

Lay out diagrams, method statements etc. for implementation of traffic control while undertaking each aspect of the Works and Services (including site specific layout diagrams and method statements if the Services require

traffic control measures not covered by standard codes of practice)
A documented process for preparation, review and approval of the Traffic Management Plan
A document tracking and control system to ensure that only the latest operative copy of the Traffic Management Plan is in circulation
Contact details for Contractor, Principal, emergency services and other stakeholders.

5.3 Safety Management Plan

If required in the Special Conditions of Contract (SCC) the Program of Performance shall include a Safety Management Plan. The Safety Management Plan establishes the practices for safety management at work sites. The Safety Management Plan must be developed by the Contractor and agreed with the Engineer.

The objectives of the Safety Management Plan are to:

- a clearly define and document the responsibilities and chain of command for the development, implementation and management of safety control measures and systems
- b establish the minimum requirements for the safety of workers, road users and community people using the Road
- c protect the Contractor's personnel at all times.

The Safety Management Plan must include at least the following:

Method statements for implementation of work safety undertaking on each aspect of the Works and Services (including safety gears for workers, use of tool box meetings for safety awareness, provision of work safety signs, training of workers on safe use of tools and equipment, safety inspection under the patrolling by Self Control Unit and commitment by the Contractor on adherence to the Occupational Safety and Health Act, 2007 amended on 2010.)

A documented process for preparation, review and approval of the Safety Management Plan

A document tracking and control system to ensure that only the latest operative copy of the Safety Management Plan is in circulation

Contact details for Contractor, Engineer, emergency services and other stakeholders.

5.4 Environmental Management Plan

If required in the Special Conditions of Contract (SCC) the Program of Performance shall include an Environmental Management Plan. The Environmental Management Plan establishes the practices for environmental management at work sites. The Environmental Management Plan must be developed by the Contractor and agreed with the Engineer.

The objectives of the Environmental Management Plan are to:

- a clearly define and document the responsibilities and chain of command for the development, implementation and management of environmental control measures and systems
- b establish the minimum requirements for environmental control measures for maintaining the adequate environment for workers, road users and community people using the Road
- c maintain the awareness of the Contractor's personnel on environmental protection at all times

The Environmental Management Plan must include at least the following:

Method statements for maintaining the adequate environmental on work sites undertaking on each aspect of the Works and Services (including specific dumping locations of debris and materials unwanted from the Road, use of tool box meetings for environmental protection awareness, training of workers on environmental control measures, inspection under the patrolling by Self Control Unit and commitment by the Contractor on adherence to the regulations and acts enacted by the government of Kenya under National Environmental Management Authority.)

A documented process for preparation, review and approval of the Environmental Management Plan

A document tracking and control system to ensure that only the latest operative copy of the Environmental Management Plan is in circulation

Contact details for Contractor, Engineer, emergency services and other stakeholders

5.5 Emergency Procedures and Contingency Plan

If required in the Special Conditions of Contract (SCC) the Program of Performance shall include an Emergency Procedures and Contingency Plan which shall establish the roles, practices and procedures during specific types of emergency events identified in the plans and contingency plans associated with the closure of roads. The Emergency Procedures and Contingency Plan must be developed by the Contractor and agreed with the Engineer and any other stakeholders the Engineer may identify.

The purpose of the Emergency Procedures and Contingency Plan is to ensure the safety of the Contractor's personnel and road users in the case of emergency and/or road closure. It should include: an effective communication and event recording system the name, contact number and specific duties of the Contractor's personnel nominated to respond to an emergency even the contact number of other parties who need to be notified in cases of emergency events, e.g. police detailed response procedures for all emergency events possible detour routes in the event of road closure

6. Service Criteria

The Contractor is required to carry out the Maintenance Services and to maintain the specific road related assets and items as stipulated in Clause 1.2.2 of the Performance Specifications during the contract duration in compliance with the Road Performance Standards as defined by the Service Criteria as stipulated hereunder.

The Employer requires the Contractor to maintain roads under the contract to be safe and efficient together with the satisfactory level of availability to road users. In order that the Contract or can achieve such, service criteria are established for guidance and classified into three Service Categories; i.e. Road Usability, Road User Comfort and Road Durability.

- 1) Road Usability is a description that encompasses the scope of passability of the Road, and service level requirements entailed for each.
- 2) Road User Comfort is a description that encompasses the scope of operational performance indicators of road assets from the road user comfort perspective, such as cleanliness, smooth riding surface, sight distance availability, shoulder availability, adequacy of safety features and functionality of NMT facilities, and service level requirements entailed for each
- 3) Road Durability is a description that encompasses the scope of operational performance indicators of road assets from the Employer's perspective towards monitoring and prolonging the life spans of the assets such as drainage capabilities, functionality of structures, functionality of road furniture and suitability of road profiles, road widths, embankments, slopes and vegetation control.

The service level requirements, defects and the response times thereof that the Contractor must comply with and separately adhere to are defined in the Performance Standards for the various standard service level categories indicated in the appendices shown in table 6.1 below;

Table 6.1. Performance Standards

Appendix	Service Level Categories	Required Level
A	Performance Standards for Paved High Road	
B	Performance Standards for Paved Standard Road	
C	Performance Standards for Unpaved High Road	
D	Performance Standards for Unpaved Standard Road	

7. Self-Control Unit (SCU)

The Contractor is required to establish a Self-Control Unit within his project organization throughout execution and completion of the Works and Services to the satisfaction of the Engineer. The roles of the SCU:

1. For conducting self-inspection to verify the degree of compliance with the Road Performance Standards as defined by the Service Levels and maintain the reporting system of self-inspection.
2. Assessment of the Road. The Self-Control Unit shall have a complete knowledge of the road condition, both on and off carriage way, at all times by carrying out patrolling, to the satisfaction of the Engineer.

3. The Self-Control Unit is responsible for Gathering information required by the Contractor to prepare the Monthly Statement.
4. The carrying out, in close cooperation with the Engineer, the Form a land Informal Inspections of Service Levels which will take place as required.

The Contractor is required to assign a technically qualified and trained person, or persons, to continuously verify the degree of compliance of Service Levels. The Contractor is also required to arrange a satisfactory means of mobility for conducting patrolling to the satisfaction of the Engineer.

8 Site Inspection and Patrolling/Reporting

The Contractor is required to undertake the following management tasks to ensure the full integrity of the Road throughout execution and performance of the Works and Maintenance Services.

8.1 Site Condition Assessment before Commencement of Works and Services

The Contractor shall conduct initial site condition assessment before commencement of the Works and Services under the contract. In case any defects and deficiencies are discovered under the assessment, the Contractor shall notify the Engineer by submitting the Defect Detection and Rectification List as attached to the Appendix 1 of the Performance Specifications and upon agreement of the Engineer, the Contractor shall carry out rectification works as the Rehabilitation Works.

In case the Contractor discovers cases of illegal encroachment and illegal dumping of unwanted materials or otherwise illegal actions by the third parties, the Contractor shall notify the Engineer for further instructions as required.

8.2 Determination of Subsection and Installation of Marker Posts

The Contractor shall either mark clearly on the road or install temporary posts to determine the subsections inspection purposes. The Contractor shall submit the record of such identification and markers to the Engineer.

8.3 Patrolling/Reporting

The Contractor shall carry out patrolling of the Road as required under the contract. Such patrolling shall be reported to the Engineer without delay through submission of the Daily Work Record, Daily Patrol Record, Monthly Photo Record and Incident Report as attached to the Appendices 2, 3, 4 and 5 of the Performance Specifications. The contractor is also required to give the result of self-inspection to the Engineer without delay through submission of the Detail Self Inspection Result Record Form (Paved Road) as attached to the Appendix 6 of the Performance Specifications.

In case the Contractor discovers cases of illegal encroachment and dumping of unwanted materials or illegal actions by third parties, the Contractor shall notify the Engineer for further instructions as required.

8.4 Ad hoc Inspection

The Engineer may carry out ad-hoc inspections to verify the degree of compliance with the Road Performance Standards as defined by the Service Levels. He may do so on his own initiative, at anytime and anywhere on the roads under the contract. If he detects any road sections where the Service Level criteria are not met, he is required to notify the Contractor within 24 hours in writing as the Corrective Order, to enable the Contractor to take remedial action as soon as possible. The results of ad-hoc inspections may not be used by the Engineer for purposes of correcting the Contractor's monthly statements or applying penalties, except for cases in which the traffic flow on the road has been completely interrupted due to the negligence and tardy action by the Contractor.

9 Monthly Statement

9.1 Preparation for Monthly Statement

For the Works and Maintenance Services executed and performed during the month, the Monthly Statement shall be prepared by the Contractor in accordance with the GCC Clauses 46, 47, 48, 49, 50 and 51. The format of Monthly Statement is attached as Appendix 7.

For the Maintenance Services. The Contractor shall take the following actions;

- 1) Prior to compilation of the Monthly Statement for each month, the Contractor is required to prepare the Payment Reduction Calculation Table for the month by utilizing the result of the most recent self- inspection recorded in Self Inspection Result Record Form to determine the total length of non-compliant sections for

each Service Scope and for calculation of the reductions required for the month by determining the percentages of non-compliant sections for each Service Scope. The formats of Payment Reduction Calculation Table are attached as Appendix 8.

- 2) The prepared Payment Reduction Calculation Table shall become the basis of the payment request for the Maintenance Services.
- 3) Upon completion of Formal Inspection, the amounts indicated on the Monthly Statement and the Payment Reduction Calculation Table will be adjusted, if required. Such modified Monthly Statement and Payment Reduction Calculation Table shall be countersigned by the Engineer to sign it and present it to the Employer for payment, and to the Contractor for information.

9.2 Reduction Weighting for Non-Compliance on Maintenance Services

In accordance with the relevant clauses of the Performance Specifications and GCC, payment reduction is applied in case of non-compliance with Service Levels.

The total aggregate weighting of 200% is applied to various Service Criteria and Documentation. The reduction weighting for each is indicated below.

Service Criteria/Documentation	Reduction Weight in case of Non- Compliance
1. Documentation (Submission of documents specified under Programme of Performance) (% doc)	4% of the monthly lump sum for on km applied if the document is not submitted.
2. Passability: (% pas)	30% of the monthly lump sum for one km applied to each one km section which does not comply.
3. Smooth and Safe Traffic: (% sst)	30% of the monthly lump sum for one km applied to each one km section which does not comply.
4. Visibility: (% vis)	20% of the monthly lump sum for one km applied to each one km section which does not comply
5. Traffic Information: (% ti)	20% of the monthly lump sum for one km applied to each one km section which does not comply
6. Drainage Capability: (% dc)	30% of the monthly lump sum for one km applied to each one km section which does not comply
7. Vegetation Control: (% vc)	30% of the monthly lump sum for one km applied to each one km section which does not comply
8. Maintenance on Other Structures: (% mos)	30% of the monthly lump sum for one km applied to each one km section which does not comply
9. Slope Stability: (% ss)	6% of the monthly lump sum for one km applied to each one km section which does not comply

(% xx indicates the percentage of service criteria non-compliant during the month for Service Criteria xx.

The amount of reduction for the Maintenance Services will be calculated as follows:

If the Contractor fails to remedy a cause of non-compliance for which a payment reduction has already been applied, the amount of the payment reduction increases month by month for that cause of non-compliance, without a ceiling being applied, until compliance is established.

The amount of payment reduction for such case will be calculated as follows;

- 1) If the non-compliance has not been remedied within the first thirty days of non-compliance, additional payment reduction for periods beyond 30 days will be split into each 30 days.
- 2) The additional payment reduction for periods beyond 30 days is calculated using the formula indicated below,

$PR = 2^n PR_0$, where

$$n = \left\lceil \frac{J-1}{30} \right\rceil \text{ rounded up to full number (without decimals)}$$

J = number of days of non-compliance beyond thirty days

PR_0 is the amount of the initial payment reduction.

10. Formal Inspection

The Formal Inspection shall be carried out jointly by the Engineer and the Road Manager at the end of each month. The Engineer shall notify the Contractor that he intends to carry out Formal Inspection in writing within 7 days of notification. The Contractor shall inform the Engineer of the proposed date and time and shall prepare for Formal Inspection. The main purpose of carrying out the Formal Inspection is to enable the Engineer to verify the information presented in the Contractor's Monthly Statement with the actual observed and measured conditions on the site.

10.1 Procedure for Formal Inspection

The Contractor shall submit the following documents as indicated in Table 10.1 to the Engineer for scrutiny prior to the Formal Inspection after the receipt of notification of carrying out Formal Inspection. The Contractor shall provide sufficient time to the Engineer to allow full scrutiny of the submitted documents.

Table 10.1 List of Documents for Formal Inspection

Appendices	Name of Documents	Mandatory Submission	Submission, if requested by the Engineer
1	Defect Detection and Rectification Lists	✓	
2	Daily Work Records		✓
3	Daily Patrol Records		✓
4	Monthly Photo Records		✓
5	Incident Condition & Activity Reports		✓
6	Detail Self-Inspection Result Record Form	✓	
7	Payment Reduction Calculation Table	✓	

The criteria of each Service Level shall be checked jointly by the Engineer and the Road Manager at sections selected by the Engineer based on visual appearance. The Engineer shall be the sole judge of compliance. If a specified criterion is not met, the one-kilometer section in which the deficit occurs will be judged non-compliant in accordance with the Self Inspection Result Record Form.

The Engineer shall prepare a brief Memorandum describing

- The general circumstances of the site visit, including date, road sections visited, persons present, etc.,
- Any non-compliance which may have been detected, and
- The time granted by the Engineer to the Contractor to remedy the detected defects.

The results of Formal Inspection on Service Levels will be recorded by the Engineer in this Memorandum. The Memorandum will state the type and location of any non-compliance detected, in particular those non-compliances already shown in the most recent Self Inspection Result Record Form provided by the Contractor as part of the Monthly Statement. For each individual case of non-compliance, the Engineer will determine a date by which the Contractor must have completed the necessary measures in order to remedy the cause of the non-compliance. A follow-up site visit is therefore necessary at the date fixed by the Engineer, or soon thereafter, in order to verify that the Contractor has indeed remedied the cause of non-compliance. If at the date indicated in the Memorandum, the Contractor has not remedied the cause for non-compliance, independent of the reason given for their failure to do so, the Contractor is subject to payment reduction in accordance with the relevant clauses of the Performance Specifications and GCC.

Based on the outcome of the Formal Inspection and subsequent remedies by the Contractor or otherwise, the Engineer will correct any possible errors or misrepresentations in the Contractor's Monthly Statement, countersign it and present it to the Employer for payment, and to the Contractor for information.

11. Performance Monitoring by the Employer

The Contractor shall acknowledge that the Employer encourages adoption of proactive approach by the Contractor on performing the Maintenance Services. To maintain such approach, the Employer shall have the power to entrust the Engineer to conduct monthly performance monitoring on the Contractor.

- 1) Performance monitoring will be conducted on service level compliance, self-control unit performance, work safety performance, performance on environment and social management, corrective order management and statutory compliance. The format of Monthly Evaluation Form is attached as Appendix 9, for the purpose of performance monitoring.
- 2) The result of performance monitoring of each month will be used for the evaluation of the Contract or at the end of each year. Evaluation of the Contractor shall be carried out by the Engineer using the Contract Evaluation Tally Sheet, which is attached as Appendix 10.

The total aggregate weighting of 100% is applied to 6 criteria in 1) above, with the weighting of 50% on service level compliance, 20% on work safety performance, 0% on statutory compliance and the remaining criteria each weighing 10%.

- 3) The result of each month on each criterion will be evaluated either a pass or a fail. The tally will be made at the end of each month, collected to the end of the year and to arrive at the performance of the criterion as the percentage of pass attained during the year. The respective weight will be applied to arrive at the evaluation score, with the maximum score of 100 and the minimum score of 0. For statutory compliance, the evaluation score will not be tabulated, but a penalty of 20 will be imposed in case the Contractor faces violation on statutory compliance at least once in a year.

12 Handover Report

Immediately prior to the completion of the contract, the Contractor shall prepare a Handover Report and submit to the employer. The purpose of the Handover Report is to provide a smooth transition to the next contract and ensure that the next contractor is aware of any outstanding issues. The Report will:

- a) Summarize any unresolved issues;
- b) Include the most recent complete set of data on the roads covered by the contract, and
- c) Provide the following details as shall be agreed by the Engineer:
 - i) A schedule of outstanding defects.
 - ii) Any unresolved issues, especially those that may impact on the next Contractor.
 - iii) Details of any sensitive issues.
 - iv) Any on-going special monitoring/maintenance needs.

APPENDICES

Appendix A: Performance Standards for Paved High Road

ROAD USABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Passability				
Pavement	Obstruction on passage	The road should always allow for passage of traffic	<< 1 hr >>	No tolerance permitted
	Obstruction on overhead clearance		<< 1 hr >>	

ROAD USER COMFORT

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Smooth and Safe Traffic				
1.Pavement	Unclean Pavement	The road must always be clean and free of soil, debris, trash and other objects.	<<3 hours >>	i) No tolerance permitted.
	Pavement too rough for road use	The pavement must at all times be kept to an acceptable level of roughness.	<<1 week>>	The permitted level of tolerance of the hand over IRI. Shall be a maximum of 2.5mm/m higher than the takeover IRI.
	Potholes	All visible potholes must be repaired	<<2 Days>>	No tolerance permitted.
	Cracking in Surface (Alligator, Transverse and Longitudinal).	All cracks >> 3mm in width must be repaired.	<<1 week>>	The permitted maximum cracked area ≤5% in any subsection. see note 1
	Rutting	All rutting of more than 2cm deep must be repaired.	<<28 days>>	The permitted maximum rutted area > 2cm deep is ≤ 2 % in any subsection. see note 2

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Smooth and Safe Traffic				
1.Pavement	Heaving/Shoving	All shoving and heaving causing depression of > 40 mm must be repaired.	<<28 days>>	The permitted maximum area under heaving/ shoving ≤5% in any subsection. see note 1
	Bleeding (complete) Bleeding	The pavement must at all times be kept free from bleeding	<<28 days>>	The permitted maximum area under bleeding ≤5% in any subsection. See note 1.
	Glazing	The pavement must at all times be kept free from Glazing at all times.	<<28 days>>	The permitted maximum area under Glazing ≤ 5% in any subsection. see note 1
	Ravelling	All ravelled areas that are more than 5mm deep must be repaired.	<<28 days>>	The permitted maximum ravelled area > 5mm deep is ≤ 2 % in any subsection. see note 2
	Stripping/Fretting	Loose depth of fine Aggregates >20mm must be repaired	<<28 days>>	The permitted maximum area undergoing stripping/fretting ≤5% in any subsection. see note 1
	Edge Damage	All loose pavement edges, and/ or pieces of pavement breaking off at the edges must be made good.	<<1 week>>	The permitted maximum affected length ≤2% in any subsection. see note 3
	Cracking in Concrete pavement	All cracks > 0.2 mm in width must be sealed	<<1 week>>	The permitted maximum cracked area <1 % in any subsection. see note 4
		Cracks > 3.0 mm	<<1 week>>	
		< 0.5 mm and 3.0 mm>		
		Cracks > 0.5 mm.	<< 2 weeks >>	

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./Days/wks."	
I) Smooth and Safe Traffic				
1.Pavement	Damage on Interlocking Paving Blocks.	1) Must be without deformations and depression so that the cross fall allows for free-flowing water so that there isn't any water ponding.	<< 24 hours>>.	1) No ponding water allowed on the paved surface for >4 % in any subsection.
		2) Free of visible defects and missing pieces.		
2.Shoulder	Damaged (Scoured/Rutted/Depressed/Potholed) paved shoulders	1) Repaired to avoid water penetration	<<2 weeks >>	1)Cross fall < the camber on the paved surface > than 4 % of the subsection.
		2) without deformations and erosion so that the cross fall is not less than the camber on the paved surface		2) The permitted maximum cracked area with cracks>> of 3 mm wide <<10 % of the area in any sub-section.
		3) free of visible potholes, cracks wider >3mm, multiple cracks and rutting of > 2cm		
	Shoulder Carriageway Step.	At all sections, difference in height at edge of pavement must be maintained to < 5cm.	<<1 week>>	The permitted maximum affected length of difference in height < 2 % for each subsection. see note 5
3.Median	Unclean Median	Must always be clean, free of debris and objects which must be removed within the time given if they pose danger to traffic safety	<< 3 days >>	No tolerance permitted.
	Ponding and spillage	The level of filling in the median should be maintained such that there is no water ponding and no fill material spills onto the carriageway	<< 2 week>>	No tolerance permitted.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Smooth and Safe Traffic				
3.Median	Poorly maintained Vegetation.	Median plantations must be maintained properly with watering and pruning as required from time to time. The height of plantations < 1m at any time. There must be no obstruction in sight distance and no fallen plantations on roadway are allowed.	<< 2 weeks>>.	No tolerance permitted.
4.Footpath	Obstruction due to soil, debris, trash rocks, fallen trees.	All footpaths must be clean, in good condition and fully functional. Should be well drained, No Potholes and have access to people with Disability.	<< 3 hours >>	No tolerance permitted.
5.Foot Bridge	Broken footbridge steps	Footbridge must be in good condition and fully functional	<< 3 hours >>	No tolerance permitted.
II) Visibility				
1.Sight Distance of availability	Vegetation obstructs visibility or is within the vegetation free zone	Must be removed if 5.5m above the road surface and/or the minimum sight distance of 240m is not maintained	<<24 hours >>.	No tolerance permitted.
2.Street Lighting	Two or more consecutive lights not functioning/missing bulbs	Road must always be well lit during the specified hours at night.	<< 24 hours>>.	The permitted maximum tolerance is 5 % of the length of the road equipped with street lighting is below the defined Service Level.
III) Traffic Information				
1.Signage	Absence of relevant warning signs/Mandatory signs	All signage must be present, complete, clean, legible, reflective and firmly installed	<<24 hours >>	Max. Tolerance is 5 % of the signs are below the defined Service Level in any subsection.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs/days/wks."	
III) Traffic Information				
1.Signage	Absence of relevant Information Signs, Edge marker Post, Guide Post, Kilometre post	All signage must be present, complete, clean, legible, reflective and firmly installed	<< 2 days >>	Max. Tolerance is 5 % of the signs are below the defined Service Level in any subsection.
	Absence of relevant Traffic signals	All traffic signals must be clean, operational and well synchronized	<< 24 hours >>	No tolerance permitted
2. Road Works Advance warning signs	Absence of relevant warning signs/obscured by vegetation	Must be placed when clearing works are required to be undertaken.	<< 1 hour>>	No tolerance permitted
3. Road Marking	Faded marking, Damaged road reflectors	All road markings/ road studs including ‘cat’s eyes’ are clear, visible and functional. If the reflection factor is < 35% of the specified design value:	<< 4 weeks>>	The permitted maximum tolerance is 5 % of the area of road markings and the number of road studs below the defined Service Level.

ROAD DURABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Drainage Capability				
1. Side Drains, Mitre Drains, Cut off drains (Lined)	Obstructions due to silt, sediments, debris, soil, materials washed after storm	Must be clean, free of sediments and obstructions to ensure free flowing conditions at all times	<< 3 days >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.
2. Side Drains, Mitre Drains, Cut off drains (Unlined)		Must be clean and free of obstructions to ensure free flowing conditions at all times	<< 3 days >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Drainage Capability.				
3. Culverts and Drifts	Obstructions due to debris	Must be clean and free of obstacles to ensure free flowing conditions at all times	Siltation/ Obstruction must be cleared << 3 days >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.
	Obstruction due to Structural Damage		Damages must be repaired <<2 weeks >>	
	Obstruction due to Broken Culvert.		Broken culverts should be reported to the Engineer << 24 hours>>	No tolerance permitted
4. Scour Checks, gabions and other erosion protection structures and gabions	Erosion due to malfunction of the structures.	Must be fully functional with no serious defects that can endanger the structure, roadway or pose safety hazard to road users	<<1 week>>	The permitted maximum tolerance is 5 %of the length below the defined Service Level.
5. Manholes and Gulley pots	Blocked manholes/ obstructions due to debris	Must be clean and free from obstructions and without structural damage and ensure free flowing conditions	<<3 days>>	The permitted maximum tolerance is 5%of the number of manholes and gulley pots below the defined Service Level.
			Damaged manholes and gulley pots << 1 week>>	
II) Vegetation Control				
1. Vegetation free zone	Unwanted vegetation on the Vegetation free zone	Carriageway, shoulders and structures must be kept with no vegetation	Height: 0mm at all times	No tolerance permitted. see note 6.
2. Inner vegetation Zone	Overgrown vegetation	Inner vegetation must zone, edge of shoulders to back of side drain /ditch or 2m away from edge of shoulder on straight and outside of curves and 5m on the inside of curves. Also control of vegetation around street furniture and other features.	Height ≤25 mm, ≥150 mm at all times	The permitted maximum tolerance is 5 %of the length below the defined Service Level in any subsection. see note 6.
			Outer vegetation <<25mm and 300 mm>>	
	Overhanging Branches obstructing visibility.	Must be removed if within 5.5m above the road surface and/or the minimum sight distance of 240m is not maintained.	<<1 week>>	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
II) Vegetation Control				
4. Trees within ROW	Self sown tree of nuisance >1 m high	Must be removed in case of outgrown roots which damage the road/structure	<< 1 month>>	The permitted maximum tolerance is 5 % of the number of trees are below the defined Service Level in any subsection
	Dead tree that presents risk of falling onto the road	Dead trees within outer vegetation zone must be removed.	<< 1 week>>	
III) Maintenance of other Structures				
1. Concrete structures	Structural deterioration	Concrete structures must be in good condition and fully functional.	In case of structural damage, the contractor to notify the Engineer <<24 Hours>>	No tolerance permitted
Blocked culvert	Obstruction due to sediments, soils and washed materials	Must be free flowing at all times		
2. Steel structures	Structural deterioration, leaking structures	The steel structures (e.g. Bridge and pedestrian bridge) must be clean, in good condition, free of corrosion and fully functional.	In case of structural damage, the contractor to notify the Engineer <<24 Hours>>	No tolerance permitted
3. Bridge expansion joints	Debris impending joint movement/ damaging the joint	All expansion joints must be clean and in good condition and fully functional	In case of any condition which threatens structural integrity of the expansion joint, the Contractor must notify the Engineer <<24 Hours>>.	No tolerance permitted
4. Guardrail / Pedestrian Rail	Deformed/ Missing guardrails	Guardrails must be in good condition and fully functional.	<< 1 week>>	No tolerance permitted
5. Riverbeds	Obstructions due to debris or inappropriate vegetation	Riverbeds must be maintained to ensure free flow of water under the bridge and up to	Any accumulation of debris <400 mm must be removed.	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
II) Vegetation Control				
4. Trees within ROW	Self sown tree of nuisance >1 m high	Must be removed in case of outgrown roots which damage the road/structure	<< 1 month>>	The permitted maximum tolerance is 5 % of the number of trees are below the defined Service Level in any subsection
	Dead tree that presents risk of falling onto the road	Dead trees within outer vegetation zone must be removed.	<< 1 week>>	
		50 meters upstream and downstream of the river at all times		
	Eroded river beds	Erosion around bridge abutments and piers must be controlled with all reasonable measures at all times.	Causes for non-compliance must be eliminated within 2 weeks after water has sufficiently receded to allow working conditions.	However, the damaged portion pending repairs maybe left on site with proper signs and safety arrangements.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./days/wks."	
IV) Slope Stability				
1. Embankment slopes	Possible slope failure	All embankment slopes must be without deformations/damages and erosions of more than 100 mm in depth	<< 1 week >>	The permitted Max. Tolerance is 5 %of the length of the road with embankment slopes is below the defined Service Level in each – subsection.
2. Slopes in Cuts	Possible slope failure	All slopes in cuts must be stable	Fallen slope material must be removed, Quantities below 10m³ per Km section	No tolerance permitted
			from pavement << 4hrs >>	
			from shoulders << 1day >>	

Response Time is the Time taken to repair a defect from the time of its detection.

Notes:

Note 1: Say A sub-section is 200m long. The length below the defined service level must not exceed 10min the sub-section.

Note 2: Say area of sub-section of 200m length= $7\text{m} \times 200 = 1400\text{sqm}$. Area of cracking not to exceed 70sqm in the sub-section.

Note 3: Say area of sub-section of 200m length= $7\text{m} \times 200 = 1,400\text{sqm}$. Area of cracking not to exceed 28sqm in the sub-section.

Note 4: Say sub-section of 200m length and the affected length of pavement edges not to exceed 4m in the sub-section.

Note 5: Say sub-section of 200m length and. The affected length of difference in height not to exceed 4m in the sub-section.

Note 6: For vegetation control such as vegetation free zone and inner vegetation, please refer to the vegetation control cross section indicated in the next page.

APPENDIX B: PERFORMANCE STANDARDS FOR PAVED STANDARD ROAD

USABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Passability				
Pavement	Obstruction on passage	The road should always allow for passage of traffic	<< 2 hrs.>>	No tolerance permitted
	Obstruction on overhead clearance		<< 2 hrs.>>	No tolerance permitted

ROAD USER COMFORT

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ days/ wks."	
1) Smooth and Safe Traffic				
1.Pavement	Unclean Pavement	The road must always be clean and free of soil, debris, trash and other objects.	<<12 hours >>	i) No tolerance permitted.
	Pavement too rough for road use	The pavement must at all times be kept to an acceptable level of roughness.	<<5 Days>>	The permitted level of tolerance of the IRI shall be a maximum of 11 mm/km.
	Potholes	Max.permitted area within 1 km depth of pothole >5 cm and dia.25 cm.	<<1 week>>	The permitted maximum area ≤5% in any subsection.
	Corrugations	Max.spacing 3.0 cm.	<<1 week>>	The permitted max. Corrugated area ≤5% in any subsection. see note 1
	Rutting	All rutting of >7 cm deep must be repaired.	<<1 week >>	The permitted maximum rutted area > 7 cm deep is≤ 5 % in any subsection. see note 1
	Loss of Camber	The Camber must be kept at 5.0 %.	<<1 week >>	≤1.0 %
	Erosion Gullies	The pavement must at all times be kept free from Gullies	<<28 days>>	The permitted maximum area under ≤5% in any subsection. see note 1.
	Soft Spots	The pavement must at all times be well drained, Quality base materials must be used at all times.	<<28 days>>	The permitted maximum Soft Spot area≤ 5% in any subsection. see note 1

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ days/ wks."	
I) Smooth and Safe Traffic				
1.Pavement	Loss of Gravel Depth	The gravel thickness along the road center line must be equal to design thickness.	<<6 Months>>	No tolerance permitted
Shoulder	Damaged (Scoured/ Rutted/ Depressed /Potholed/ High vegetation) unpaved shoulders	1) Repaired to avoid water penetration	<<28 days >>	1) Cross fall < the camber on the unpaved surface > 4 % of the subsection.
		2) without deformations and erosion so that the cross fall is not less than the camber on the paved surface		2) The permitted maximum cracked area with cracks> 3 mm wide <10 % of the area in any sub-section.
		3) free of visible potholes, cracks wider >3mm, multiple cracks and rutting of > 2cm		
	Shoulder/ Carriageway Step.	At all sections, difference in height at edge of pavement must be maintained to < 5cm.	<<2 weeks>>	The permitted maximum difference in height should be < 2 % for each subsection. see note 2
Footpath	Obstruction due to soil heaps, debris, trash rocks, fallen trees, abandoned vehicles, rubbish.	All footpath must be clean, in good condition and fully functional. Should be well drained, No Potholes and have access to people with Disability.	<< 3 hours >>	No tolerance permitted.
II) Visibility				
Sight Distance availability	Vegetation obstructs visibility or is within the vegetation free zone	Must be removed if >5.5m above the road surface and/or the minimum sight distance of 240m is not maintained	<<24 hours >>.	No tolerance permitted.
III) Traffic Information				
Signage	Absence of relevant warning signs/Mandatory signs	All signage must be present, complete, clean, legible, reflective and firmly installed	<<1 week >>	Max.tolerance is 5 % of the signs are below the defined Service Level in any subsection.
	Absence of relevant Information Signs, Edge marker Post, Guide Post, Kilometre post	All signage must be present, complete, clean, legible, reflective and firmly installed	<< 2 weeks >>	Max.tolerance is 5 % of the signs are below the defined Service Level in any subsection.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ days/ wks."	
III) Traffic Information				
Signage	Absence of relevant Traffic signals	All traffic signals must be clean, operational and well synchronized	<< 3 days >>	No tolerance permitted
	Absence of minimum Traffic Speed	Minimum traffic speed is 40 km/hr.	<< 5 days>>	Not Applicable
Road Works Advance warning signs	Absence of relevant warning signs/obscured by vegetation	Must be placed when clearing works are required to be undertaken.	<< 6 hours>>	No tolerance permitted

ROAD DURABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ Days/wks."	
I) Drainage Capability				
1. Side Drains, Mitre Drains, Cut off drains	Obstruction due to sediments, soils, debris and washed materials	Must be clean and free of obstructions to ensure free flowing conditions at all times	<< 1 week >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.
2. Culverts and Drifts	Obstructions due to debris	Must be clean and free of obstacles to ensure free flowing conditions at all times	Siltation/ Obstruction must be cleared << 7 days >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.
			Damages must be repaired <<3 weeks >>	
	Obstruction /Collapse due to Structural Damage		Broken culverts should be reported to the Engineer << 1 week>>	No tolerance permitted
3. Scour Checks, gabions and other erosion protection structures and gabions	Erosion due to malfunction of the structures.	Must be fully functional with no serious defects that can endanger the structure, roadway or pose safety hazard to road users	<<1 week>>	The permitted maximum tolerance is 5 %of the length below the defined Service Level.
II) Vegetation Control				
Vegetation free zone	Unwanted vegetation on the Vegetation free zone	Carriageway, shoulders and structures must be kept with no vegetation.	Height: 0mm at all times	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ Days/wks."	
II) Vegetation Control				
2. inner vegetation Zone	Overgrown vegetation	Inner vegetation must zone, edge of shoulders to back of side drain /ditch or 2m away from edge of shoulder on straight and outside of curves and 5m on the inside of curves. Also control of vegetation around street furniture and other features.	Height <<25 mm and 150 mm >>at all times	The permitted maximum tolerance is 5 %of the length below the defined Service Level in any subsection.
			Outer vegetation <<25mm and 300 mm>>	
	Overhanging branches obstructing visibility.	Must be removed if > 5.5m above the road surface and/or the minimum sight distance of 240m is not maintained.	<<1 week>>	No tolerance permitted
3. Trees within ROW	Self-sown tree of nuisance >1 m high	Must be removed in case of outgrown roots which damage the road/structure	<< 1 month>>	The permitted maximum tolerance is 5 % of the number of trees are below the defined Service Level in any subsection.
	Dead tree that presents risk of falling onto the road.	Dead trees within outer vegetation zone must be removed.	<< 1 week>>	
III) Maintenance of other Structures				
1. Concrete structures	Structural deterioration	Concrete structures must be in good condition and fully functional.	In case of structural damage, the contractor to notify the Engineer <<24 Hours>>	No tolerance permitted
	Blocked/Obstruction due to sediments, soils and washed materials	Must be free flowing at all times		
2. Steel structures	Structural deterioration, Leaking structures	The steel structures (e.g. Bridge and pedestrian bridge) must be clean, in good condition, free of corrosion and fully functional.	In case of structural damage, the contractor to notify the Engineer <<24 Hours>>	No tolerance permitted
3. Bridge expansion joints	Debris impeding joint movement/damaging the joint	All expansion joints must be clean and in good condition and fully functional	In case of any condition which threatens structural integrity of the expansion joint, the Contractor must notify the Engineer <<24 Hours>>.	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Element	Defect		<< x hours>> means "within x hrs./ Days/wks."	
III) Maintenance of other Structures				
4. Guardrail /Pedestrian Rail	Deformed/Missing guardrails	Guardrails must be in good condition and fully functional.	<< 1 week>>	No tolerance permitted
5. Riverbeds	Obstructions due to debris or inappropriate vegetation	Riverbeds must be maintained to ensure free flow of water under the bridge and up to 50 meters upstream and downstream of the river at all times	Any accumulation of debris <400 mm must be removed.	No tolerance permitted
	Eroded river beds	Erosion around bridge abutments and piers must be controlled with all reasonable measures at all times.	Causes for non-compliance must be eliminated within 2 weeks after water has sufficiently receded to allow working conditions.	However, the damaged portion pending repairs maybe left on site with proper signs and safety arrangements.
IV) Slope Stability				
Embankment slopes	Collapse of embankment slopes	All embankment slopes must be without deformations/damages and erosions of more than 100 mm in depth	In case of any condition is observed, the Contractor must notify the Engineer <<24 Hours>>.	The permitted Max. tolerance is 5 %of the length of the road with embankment slopes is below the defined Service Level in each subsection.
2. Slopes in Cuts	Eroded/High vegetation//Collapse of slope.	All slopes in cut must either be stable or are stabilized with adequate retaining walls.	In case of any condition is observed, the Contractor must notify the Engineer <<24 Hours>.	No tolerance permitted

Response Time is the Time taken to repair a defect from the time of its detection.

Notes:

Note 1: Say A sub-section is 200m long. The length below the defined service level must not exceed 10min the sub-section.

Note 2: Say area of sub-section of 200m length=7mx200=1400sqm. Area of cracking not to exceed 70sqm in the sub-section.

Note 3: Say area of sub-section of 200m length=7mx200=1,400sqm. Area of cracking not to exceed 28sqm in the sub-section.

Note 4: Say sub-section of 200m length and the affected length of pavement edges not to exceed 4m in the sub-section.

Note 5: Say sub-section of 200m length and. The affected length of difference in height not to exceed 4min the sub-section.

Note 6: For vegetation control such as vegetation free zone and inner vegetation, please refer to the vegetation control cross section indicated in the next page.

APPENDIX C: PERFORMANCE STANDARDS FOR UNPAVED STANDARD ROAD

ROAD USABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/wks."	
I) Passability				
Pavement	Obstruction on passage	The road should always allow for passage of traffic	<< 24 hrs.>>	No tolerance permitted
	Obstruction on overhead clearance		<<24 hrs.>>	No tolerance permitted

ROAD USER COMFORT

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
I) Smooth and Safe Traffic				
1.Pavement	Unclean Pavement	The road must always be clean and free of soil, debris, trash and other objects.	<<24 hours >>	i) No tolerance permitted.
	Pavement too rough for road use	The pavement must at all times be kept to an acceptable level of roughness.	<<5 Days>>	The permitted level of tolerance of the IRI shall be a maximum of 11 mm/km.
	Potholes	Max.permitted area within 1 km depth of pothole should be <5 cm and dia.25 cm.	<<2 weeks>>	The permitted maximum area ≤5% in any subsection.
	Corrugations	Max.spacing 3.0 cm.	<<2 weeks>>	The permitted max. corrugated area ≤5% in any subsection. see note 1
	Rutting	All rutting of more than 7 cm deep must be repaired.	<<2 weeks>>	The permitted maximum rutted area >7 cm deep is ≤5 % in any subsection. see note 1
	Loss of Camber	The Camber must be kept at 5.0 %.	<<2 weeks>>	± 1.0 %
	Erosion Gullies	Proper transversal Drainage	<<28 days>>	The permitted maximum area under Erosion Gullies ≤5% in any subsection. see note 1.
	Soft Spots	The pavement must at all times be well drained, Quality base materials must be used at all times.	<<28 days>>	The permitted maximum Soft Spot area ≤5% in any subsection. see note 1

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
I) Smooth and Safe Traffic				
1.Pavement	Loss of Gravel Depth	The gravel thickness along the road centre line must be equal to design thickness.	<<6 Months>>	No tolerance permitted
Shoulder	Damaged (Scoured/ Rutted/ Depressed/ Potholed/ High vegetation) unpaved shoulders	1) Repaired to avoid water penetration	<<28 days >>	1) Cross fall < the camber on the unpaved surface > 4 % of the subsection.
		2) without deformations and erosion so that the cross fall is not less than the camber on the paved surface		2) The permitted maximum cracked area with cracks> 3 mm wide <10 % of the area in any sub-section.
		3) free of visible potholes, cracks wider >3mm, multiple cracks and rutting of > 2cm		
	Shoulder/ Carriageway Step.	At all sections, difference in height at edge of pavement must be maintained to < 5cm.	<<2 weeks>>	The permitted maximum difference in height < 2 % for each subsection . see note 2
Footpath	Obstruction due to soil heaps, debris, trash rocks, fallen trees, abandoned vehicles, rubbish.	All footpath must be clean, in good condition and fully functional. Should be well drained, No Potholes and have access to people with Disability.	<< 3 hours >>	No tolerance permitted.
II) Visibility				
Sight Distance availability	Vegetation obstructs visibility or is within the vegetation free zone	Must be removed if >5.5m above the road surface and/or the minimum sight distance of 240m is not maintained	<<24 hours >>.	No tolerance permitted.
III) Traffic Information				
2.Signage	Absence of relevant warning signs/Mandatory signs	All signage must be present, complete, clean, legible, reflective and firmly installed	<<2 weeks >>	Max.tolerance is 5 % of the signs are below the defined Service Level in any subsection.
	Absence of relevant Information Signs, Edge marker Post, Guide Post, Kilometer post	All signage must be present, complete, clean, legible, reflective and firmly installed	<< 4 weeks >>	Max.tolerance is 5 % of the signs are below the defined Service Level in any subsection.

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
III) Traffic Information				
2.Signage	Absence of relevant Traffic regulatory signals	All traffic signals must be clean, operational and well synchronized	The Contractor to inform relevant Authorities.	Not Applicable
	Absence of minimum Traffic Speed	Minimum traffic speed is 30 km/hr.	<< 5 days>>	Not Applicable
Road Works Advance warning signs	Absence of relevant warning signs/obscured by vegetation	Must be placed when clearing works are required to be undertaken.	<< 12 hours>>	No tolerance permitted

ROAD DURABILITY

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
1) Drainage Capability.				
1. Side Drains, Mitre Drains, Cut off drains.	Obstruction due to sediments, soils, debris and washed materials	Must be clean and free of obstructions to ensure free flowing conditions at all times	<< 2 weeks >>	The permitted maximum tolerance is 5% of the length of drains below the defined Service Level.
2. Culverts and Drifts	Obstructions due to debris	Must be clean and free of obstacles to ensure free flowing conditions at all times	Siltation/ Obstruction must be cleared << 1 week>>	The permitted maximum tolerance is 10 % of the length of drains below the defined Service Level.
			Damages must be repaired <<4weeks >>	
	Obstruction /Collapse due to Structural Damage		Broken culverts should be reported to the Engineer << 1 week>>	No tolerance permitted
3. Scour Checks, gabions and other erosion protection structures and gabions	Erosion due to malfunction of the structures.	Must be fully functional with no serious defects that can endanger the structure, roadway or pose safety hazard to road users	<<4 weeks>>	The permitted maximum tolerance is 5 %of the length below the defined Service Level.
II) Vegetation Control				
1.Vegetation free zone	Unwanted vegetation on the Vegetation free zone	Carriageway, shoulders and structures must be kept with no vegetation.	Height: 0mm at all times	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
II) Vegetation Control				
2. inner vegetation Zone	Overgrown vegetation	Inner vegetation must zone, edge of shoulders to back of side drain /ditch or 2m away from edge of shoulder on straight and outside of curves and 5m on the inside of curves. Also control of vegetation around street furniture and other features.	Height <<25mm and 300 mm>> at all times	The permitted maximum tolerance is 5 %of the length below the defined Service Level in any subsection.
			Outer vegetation<<25mm and 500 mm>>	
3. Trees within ROW	Self-sown tree of nuisance >1 m high	Must be removed in case of overgrown roots which damage the road/structure	<< 1 month>>	The permitted maximum tolerance is 5 % of the number of trees are below the defined Service Level in any subsection.
	Dead tree that presents risk of falling onto the road.	Dead trees within outer vegetation zone must be removed.	<< 1 week>>	
III) Maintenance of other Structures				
1. Concrete structures	Structural deterioration	Concrete structures must be in good condition and fully functional.	In case of structural damage, the contractor to notify the Engineer	No tolerance permitted
	Blocked/ Obstruction due to sediments, soils and washed materials	Must be free flowing at all times		
2. Steel structures	Structural deterioration, Leaking structures	The steel structures (e.g. Bridge and pedestrian bridge) must be clean, in good condition, free of corrosion and fully functional.	In case of structural damage, the contractor to notify the Engineer	No tolerance permitted
3. Bridge expansion joints	Debris impeding joint movement/ damaging the joint	All expansion joints must be clean and in good condition and fully functional	In case of any condition which threatens structural integrity of the expansion joint, the Contractor must notify the Engineer <<2weeks>>.	No tolerance permitted
4. Guardrail /Pedestrian Rail	Deformed/Missing guardrails	Guardrails must be in good condition and fully functional.	Damages and defects must be repaired << 2 weeks>>	No tolerance permitted

Service criteria		Service Level	RESPONSE TIME	TOLERANCE
Check Element	Defect		<< x hours>> means "within x hrs./days/weeks"	
III) Maintenance of other Structures				
5. Riverbeds	Obstructions due to debris or inappropriate vegetation	Riverbeds must be maintained to ensure free flow of water under the bridge and up to 50 meters upstream and downstream of the river at all times	Any accumulation of debris >400 mm must be removed.	No tolerance permitted
	Eroded river beds	Erosion around bridge abutments and piers must be controlled with all reasonable measures at all times.	Causes for non-compliance must be eliminated << 2 weeks>> after water has sufficiently receded to allow working conditions.	However, the damaged portion pending repairs maybe left on site with proper signs and safety arrangements.
IV) Slope Stability				
1. Embankment slopes	Collapse of embarkment slopes	All embankment slopes must be without deformations/damages and erosions of > 100mm in depth	<< 2 weeks >>	The permitted Max. tolerance is 5 %of the length of the road with embankment slopes is below the defined Service Level in each subsection.
2. Slopes in Cuts	Eroded/ High vegetation/ Collapse of slope protection	All slopes in cut must either be stable or are stabilized with adequate retaining walls.	In case of any condition is observed, the Contractor must notify the Engineer <<24 Hours>>.	No tolerance permitted

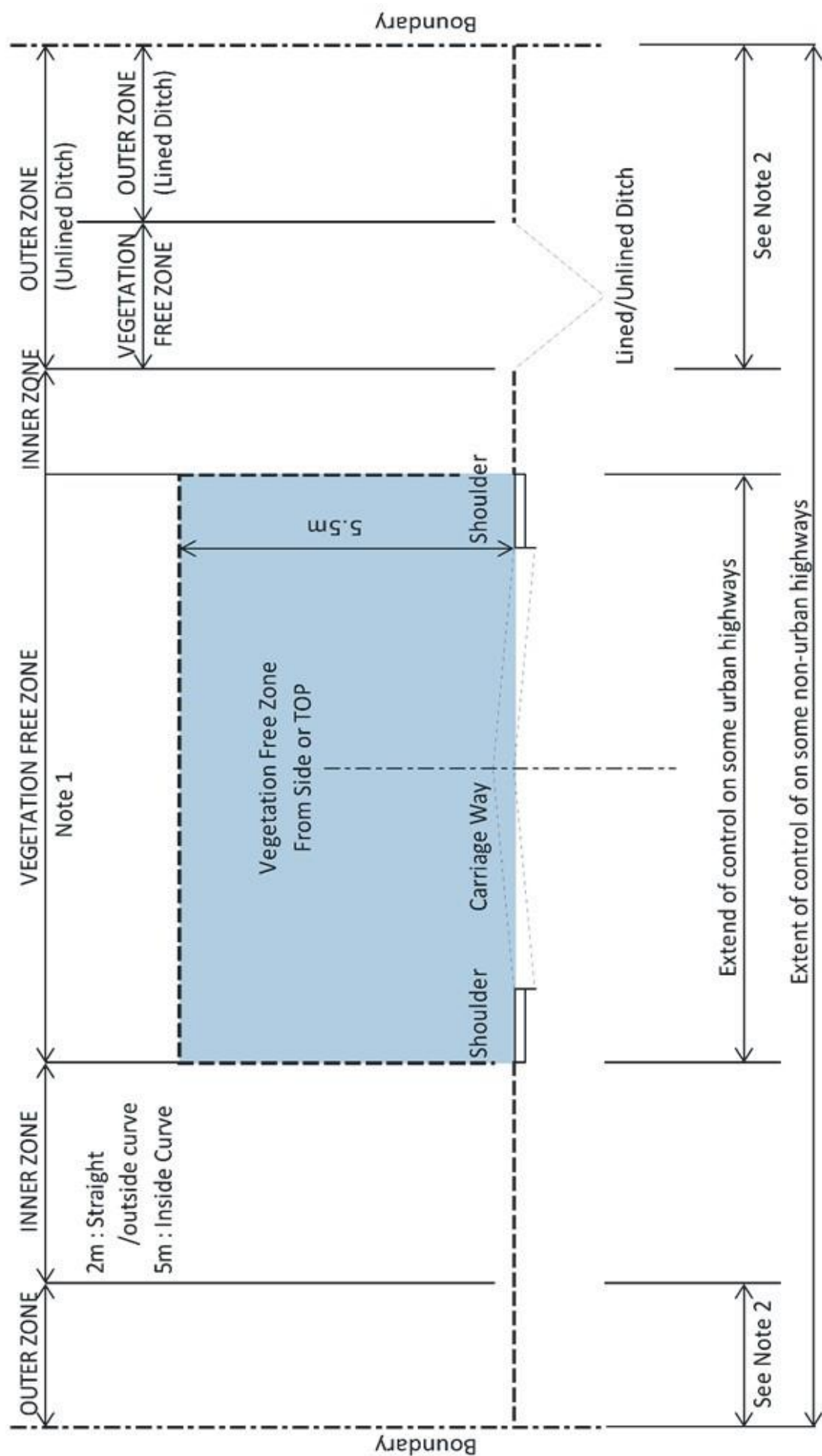
Response Time is the Time taken to repair a defect from the time of its detection.

Notes

Note 1: Say area of sub-section of 200 m length =7m x 200=1400sqm. Area of does not to exceed 70 sqm in the subsection. This applies for Rutting, Soft Spots.

Note 2: Say sub-section of 200 m length and the affected length of difference in height not to exceed 4 m in the sub-section.

Vegetation Control



- Note 1 Vegetation free zone must be maintained free of all vegetation
- Note 2 These areas must be maintained according to the local requirements

Appendix 1: Defect Detection/ Rectification Record Form

Road Authority			
Contractor			
Project		Road Name	
Service Level	Category		
	Service Scope		
	Service Criteria		

No	Detection (to be filled by SCU or PM)			Rectification (to be filled by EXU)			Remark
	Date	Location	Description	Date	Compliance (Yes/No)		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
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42							
44							

Appendix 2: Daily Work Record Form

Basic Information									
Road Authority									
Contractor									
Project									
Road Name/Chainage									
Road Class					Standard Service Level				
Date									
Date					Weather				
PBC Work Operations									
Chainage		Activity Description						Photo No,	
From	To								
Machinery, Truck					Labour				
Description			Plate No,	Photo No,	Category		number	Photo No,	
Materials Delivered to Site					Materials Removed from Site				
Description			Quantity	Photo No,	Description		Quantity	Photo No,	
Admission									
Personal			Name			Sign		Date	
Self-Control Unit									
Road Manager									

Appendix 3: Daily Patrol Record

Basic Information			
Road Authority			
Contractor			
Project			
Road Name/Chainage			
Road Class		Standard Service Level	

Patrol

Date		Weather	
------	--	---------	--

Cleanliness/Obstacles

Chainage	Time		Remarks	Photo No.
	Detection	Removal		

Any other activities undertaken

Chainage	Objects, Condition, other information	Photo No.

Admission

Personal	Name	Sign	Date
Self-Control Unit			
Road Manager			

Appendix 4: Monthly Photo Record

Basic Information	
Road Authority	
Contractor	

Project			
Road Name/Chainage			
Road Class		Standard Service Level	

No,	DATE	DATE
Photo	Photo file size: less than 300kB	Photo file size: less than 300kB
Remarks		
No,	DATE	DATE
Photo	Photo file size: less than 300kB	Photo file size: less than 300kB
Remarks		
No,	DATE	DATE
Photo	Photo file size: less than 300kB	Photo file size: less than 300kB
Remarks		

Appendix 5: Incident Condition and Activity Report

Basic Information			
Road Authority			
Contractor			
Project			
Road Name/Chainage			
Road Class		Standard Service Level	

Incident Notification	Caller		Phone No,
Date/Time /Chainage or Location			
Information Resource	Road Authority, Police, Engineer, Road Users, Others ()		
Mature of Incident			
Location of Incident			
Condition of Accident Vehicles			
Number/Conditions of injured People			

Description

--

Site Condition (Any road asset damaged by the accident)				Photo No,
Assets	Damage condition			

Appendix 6: Detail Self Inspection Result Record Form (Paved Road)

[illegible]

Appendix 7: Payment Reduction Calculation Table

Appendix 8 Payment Reduction Calculation Table (Paved Road)

Appendix 8 Payment Reduction Calculation Table (Paved Road)										Sheet		
Project	ABC Road PBC Maintenance Project							Contract Period		24		
Road Authority	KeNHA or KURA or KeRRA or KWS			Contractor	XYZ Contractor							
Road Name/ Class/ Chainage/ (j)Length		ABC Road		Road Class		A, B, C, D, E, Unclassified, Urban Road				10.0km		
Statement Month/ Year and Elapse of Month		September	2014	3	Standard Service Level			High				
Contract Due Amount of the Month (x)		400,000		KSH								
Service Level Criteria		Compliance			Reduction							
Service	Service Scope	(a) Contract Road Length (km)	(b) Required Target	(c)=(a)*(b) Target Length (km)	(d)=(a)-(c) Exemption Length (km)	(e) Non-Compliant Length (km)	(f)=(e)-(d) (>=0) Adjusted Non-Compliant Length (km)	(f)/(e) NON-Compliant Rate	(g) Reduction Weight	(h)=(f)*(g) Reduction Rate (%)	(i)=(e)*(h) Reduction Length (km)	
Documentation		10.0	100%	10.0	-	-	-	1	4%	4.0%	0.40	
1. Road Usability	A) Passability	10.0	100%	10.0	0.0	2.0	2.0	20%	40%	8.0%	0.80	
2. Road User Comfort	B) Smooth and Safe Traffic	10.0	100%	10.0	0.0	2.0	2.0	20%	30%	6.0%	0.60	
	C) Visibility	10.0	100%	10.0	0.0	2.0	2.0	20%	20%	4.0%	0.40	
	D) Traffic Information	10.0	100%	10.0	0.0	2.0	2.0	20%	20%	4.0%	0.40	
3. Road Durability	E) Drainage Capability	10.0	100%	10.0	0.0	0.0	0.0	0%	30%	0.0%	0.00	
	F) Vegetation Control	10.0	100%	10.0	0.0	6.0	6.0	60%	30%	18.0%	1.80	
	G) Maintenance of other Structures	10.0	100%	10.0	0.0	6.0	6.0	60%	20%	12.0%	1.20	
	H) Slope Stability	10.0	100%	10.0	0.0	6.0	6.0	60%	6%	3.6%	0.36	
									(j) Total=	59.6%	5.96	
									200%			
Required Target					Calculation of the Payment Amount of the Month							
Elapse of Month	1. Road Usability	2. Road User Comfort	3. Road Durability	Contract Due Amount of the Month		KSH	400,000	(x)				
1	50%	50%	50%	Reduction Rate		%	60%	(j)				
2	100%	75%	75%	Reduction Amount		KSH	238,400	(z)=(x)*(j)				
3	100%	100%	100%	Payment Amount of the Month		KSH	161,600	(y)=(x)-(z)				
4	100%	100%	100%									
5	100%	100%	100%									
6	100%	100%	100%									
7~	100%	100%	100%									

Appendix 8: Monthly Statement

Contract No.							
Contract Name: PERFORMANCE-BASED ROAD MAINTENANCE CONTRACT FOR...						CERTIFICATE NO.	
Contractor:						VALUATION AS AT	
CONTRACT SUM :		Region		Fin. Year			
		Administrative Boundary:		Month			
		Previous Certificate (Kshs)		This Certificate (Kshs)		Total (Kshs)	
A. Maintenance Services							
B. Rehabilitation Works							
C. Improvement Works							
D. Emergency Works							
E. Sub-total of (A+B+C+D)							
F. REDUCTION FOR NON-COMPLIANCE							
G. Sub-total of (E-F)							
TOTAL VALUE OF WORK (G)							
H. ADD 16% VAT (16% of G)							
I. LESS 5 % RETENTION (5% of (G))							
J. LESS 3% WITHHOLDING TAX (3% of G)							
K. CUMMULATIVE DEDUCTIONS (I+J)							
L. TOTAL PAYMENT (G-K)							
M. ADVANCE PAYMENT							
N. RECOVERY OF ADVANCE							
O. INTEREST ON LATE PAYMENTS							
P. LESS LIQUIDATED DAMAGES							
Q. NET PAYMENT							
				LESS PREVIOUS CERTIFICATES		-	
				NOW DUE TO CONTRACTOR		-	
Submitted by							
_____		Date.....					
Contractor							
I hereby confirm the above rates & quantities are correct							
Checked by							
_____		Date.....					
THE ENGINEER		_____		Date.....		EMPLOYER (QM/M)	

Appendix 9: Monthly Evaluation Form

Appendix 9 Monthly Evaluation Form

Number of elapsed month =

Project Title	
Road Authority	
Contractor	
Date of checking	

	Date	Name	Signature
Engineer			
Road Manager			

This form is used by Engineer to verify monthly performance for contract evaluation.

Scope		Requirement		Pass or Fail*1
1	Service level compliance	1	Reduction rate for service level non-compliance is less than 5.0%	
2	Self-control unit performance	1	Self-control unit is organized by proper contractor's member	
		2	Self-control unit operates properly	
		Pass or fail in total*2		
3	Work Safety Management	1	Workers and operators wear proper safety gear	
		2	Traffic control is conducted properly	
		3	No accident of workers, operators attributable to the contractor	
		4	No accident of third-parties attributable to the contractor	
		Pass or fail in total*2		
4	Environment and social management	1	Environmental consideration is properly conducted	
		2	Waste material generated from the site is properly disposed	
		3	Transportation by vehicles is properly controlled	
		Pass or fail in total*2		
5	Corrective order	1	No corrective order is made by authority	
6	Statutory compliance	1	Contractor complied with relevant statutory regulations	

*1 Filling Example: "Pass"="1" "Fail"="0" "Not applicable"="N/A"

*2 Scoring criteria:

In case of having more than one requirement in each evaluation scope, all the requirements except not applicable case shall be passed for pass evaluation in total

Appendix 10: Contract Evaluation Tally Sheet

Project Title	
Road Authority	
Contractor	
Date of Commencement	
Expected date of Completion	
Number of elapsed months in the end of last year	

	Date	Name	Signature
Engineer			
Road Manager			

1. This tally sheet is for the Engineer to evaluate performance of contractor by scoring at the end of contract. Use this form for evaluation in every year during contract period.
2. Fill "1" for "Pass" or "0" for "Fail" in column for each item and month according to monthly evaluation form. Fill "-" in column for non applicable.

Item		Monthly Evaluation												(a)	(b)	(c)	(d)	(f)	
		No. of month with "Pass=1" in past years	Year (2015)												No. of month with "Pass=1" in total	(a)/ Total month (%)	Weight for each item	Score for each item (b)*(c)	Penalty*1
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
1	Service level compliance													0		50 %	0		
2	Self-control unit performance													0		10 %	0		
3	Work safety management													0		20 %	0		
4	Environment and social management													0		10 %	0		
5	Corrective order issuance													0		10 %	0		
6	Statutory compliance													0				0	
																	0	0	
																	Total score	0	

*1: Penalty of -20 point is given for non-compliance in equal or more than one month

SECTION V B: SPECIAL SPECIFICATIONS (REHABILITATION)

SECTION 1: GENERAL

101 LOCATION AND EXTENT OF SITE

The project is located in **NAIROBI NATIONAL PARK** consisting of the following roads to ETB Standard:

- JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7), 23.2KM
- JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9), 2.5KM

102 EXTENT OF SCOPE OF WORKS

The extent of works under this particular contract entails: -

- Preliminaries and General items
- Grading and gravelling
- Any other works that may be instructed by the Engineer

104 PROGRAMME OF EXECUTION OF THE WORKS

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

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

The Contractor shall carry out the contract in accordance with the programme agreed with the Engineer, but he shall in no manner be relieved by the Engineer's approval of the programme, of his obligation to complete the works in the prescribed order and by the prescribed completion date and he shall from time to time review his progress and make such amendments to his rate of execution of the works as may be necessary to fulfill his obligations.

105 ORDER OF EXECUTION OF WORKS

In addition to Clause 105 of the Standard Specification the Contractor shall carry out the Works such that a continuous and consecutive output of fully completed work is achieved. The Resident Engineer shall be required to check the contractor's work execution progress guided by the Supervision Checklist provided as Appendix II to these Special Specifications.

107 TAKING OVER CERTIFICATE

The minimum length of road for which a taking over or completion certificate will be issued shall be the whole road when completed.

109 NOTICE OF OPERATIONS

Add the following sub- Clause:

Notification Terms:

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

Explosives and Blasting:

- (a) The requirements of the Laws of Kenya governing explosives and other requirements and regulations of Government of Kenya and other authorities shall be complied with.
- (b) No explosives of any kind shall be used without prior written consent of the Engineer.
- (c) The Contractor shall be solely responsible for the provision, handling, storage and transporting of all explosive ancillary materials and all other items of related kind whatsoever required for blasting.

117 HEALTH, SAFETY AND ACCIDENTS

Add to Sub-Clause 19.1 the following:

In addition to providing, equipping and maintaining adequate first aid stations with minimum of the following items:-Non Stick wound dressing, election of plaster/band aids, Crepe bandages,Gauze and cotton wool, Antiseptic solution (washing wounds), Oral re-hydration sachets,

Antiseptic cream – Betadine, Burnol, Pain killers Panadol, Disprin, Anti diarrhoea – Immodium, Diadis, Charcoal, Anti histamine – Piriton, Triludan, Anti-nausea – Stemetil, Antibiotic – Amoxil, Septrin, Surgical gloves Eye ointment throughout the works in accordance with the Laws of Kenya,the contractor shall provide and should provide contact and written MOU with local dispensary or medical clinic during the duration of the Contract.

Such dispensary shall be with a qualified Clinical Officer / Nurse who shall offer the necessary medical advice on HIV and related diseases to the Engineer's and Contractor's Site staff.

The Contractor shall allow for this in the rates and be responsible for all site welfare arrangements at his own cost.

121 DIVERSION OF SERVICES

- (a) The Contractor shall acquaint himself with the location of all existing services such as telephone lines, electricity cables, water pipes, sewers etc., before execution of any works that may affect the services. The cost of determining the location of the existing services together with making good or repairing of any damage caused all to the satisfaction of the Engineer shall be included in the Bid rates.
- (b) Subject to the agreement with the Engineer, the Contractor shall be responsible for removal of alteration and relocation of existing services.
- (c) . The Contractor shall indemnify the Employer against claims originating from damage to existing services or works.

123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS

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

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

Notwithstanding Clause 124 of the Standard Specification all requirements of land for temporary works and construction purposes shall be to the approval of the Engineer but the Contractor will make all necessary arrangements with the property owners concerned and pay all charges arising there from. On or before completion of the Contract, the Contractor shall remove all temporary works and shall restore all such land to the condition in which it was immediately prior to the occupation thereof as far as s reasonable and practicable. No separate payment will be made to the Contractor on account of these items and the Contractor must make due allowance for them in his rates.

Notwithstanding Clause 120 of the Standard Specifications, the Contractor shall be required to appoint a competent surveyor 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.

128 STORAGE OF MATERIALS

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

129 TEST CERTIFICATES

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

Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the specifications and shall give the results of all the tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

131 SIGNBOARDS

The Contractor shall provide and erect publicity signs on the site as directed. The Engineer shall, as shown in the Drawings, direct the minimum dimensions and thickness of the steel framework and sheet. The framework and sheet shall be prepared and painted black, while the ring at the top of the supporting frames shall be painted white. The wordings and KWS's logo shall be printed on backlit sticker paper resistant to the effects of weather using reflectorized paint or material approved by the Engineer. The sticker shall be placed on both sides of the board. The colours, fonts and heights of the letters shall be as indicated on the typical drawings and as directed by the Engineer.

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF

Additional attendant staff, as required by the Engineer, shall be paid for under Item 01-80-031 of the Bill of Quantities.

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

In addition to provisions of the Clause 138 of the Standard Specification, the Contractor shall when instructed, provide and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the Contract, the following types and numbers of brand-new vehicles or as specified. The Engineer shall approve the type of vehicles and confirm the number of each type to be provided. The Contractor shall insure the vehicles comprehensively for any licensed drivers and shall provide competent drivers during normal working hours and whenever required by the Engineer. The cost of provision of the vehicle shall be inclusive of the first 4,000 kilometers travelled in any month.

Should any vehicle supplied not be in roadworthy condition, the Contractor shall provide an acceptable

equivalent replacement vehicle until such a time as the original vehicle is repaired to the satisfaction of the Engineer and returned for use.

(a) Type 1 Vehicles (Double Cabin 4WD Pick up)

Type 1 Vehicles should be four Wheel Drive (4WD), with power assisted steering, Double wishbone independent suspension at front axle and rigid axle with leaf springs at rear, diesel propelled engine maximum 2,500 cc. The starting mileage of the vehicles shall not exceed 60,000km odometer reading. The vehicles should be fitted with other accessories below:

- (a) Spare tyre and wheel jack;
- (b) FM radio and CD player;
- (c) Power Windows;
- (d) Full Air-conditioning;
- (e) Immobilizer and antitheft security system;
- (e) Driver and passenger SRS Airbags;
- (f) Canvas cover over the carrying deck at the back.

At the end of the contract, all type 1 vehicles shall revert to the Contractor.

(b) Type 2 Vehicles (station wagon/saloon)

Specifications for Type 2 Vehicles shall be station wagon/saloon vehicles; petrol propelled engine maximum 1,800 cc. The starting mileage of the vehicles shall not exceed 60,000km odometer reading. shall in addition be fitted with a fibre glass body or similar and two columns of sitting benches on the carting deck at the back.

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

At the end of the contract, all type 2 vehicles shall revert to the Contractor.

Payment:

Payment for vehicle shall be per vehicle month in item 01-60-002 of the BOQ.

139 MISCELLANEOUS ACCOUNTS

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

142 ENVIRONMENTAL PROTECTION

The Contractor shall comply with the Statutory Regulations in force in Kenya regarding environmental protection and waste disposal, and shall liaise with the National Environmental Management Agency (NEMA).

The Contractor shall ensure so far as is reasonably practicable and to the satisfaction of the Engineer; that the impact of the construction on the environment shall be kept to a minimum and that appropriate measures are taken to mitigate any adverse effects during the construction.

- (a) The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural

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

- (b) The Contractor shall ensure that measures are in place to control soil erosion and water pollution, by use of berms, dykes, silt fences, brush barriers, dams, sediment basins, filter mats, netting, gravel, mulches, grasses, slope drains, contour banks, and other erosion control devices and methods. Temporary erosion control provisions shall be coordinated with permanent erosion control features to assure economical, effective and continuous measures throughout the period of the works. The Contractor's attention is drawn to the requirements of Clause 502, in that works need to be progressively finished so that permanent vegetation can establish quickly to mitigate soil erosion and erosion of drains.
- (c) The Contractor shall provide all the labour, equipment, materials, and means required and shall carry out proper and efficient measures wherever and as often as necessary to minimise the dust nuisance.
- (d) The Contractor shall comply with all applicable Kenyan laws, orders and regulations concerning the prevention, control and abatement of excessive noise. Blasting, use of jackhammers, pile driving, rock crushing, or any other activities producing high-intensity impact noise may be performed at night only upon approval of the Engineer.
- (e) Immediately after extraction of materials, all borrows pits shall be backfilled to the satisfaction of the Engineer. In particular, borrow pits near the project road shall be backfilled in such a way that no water collects in them.
- (f) Spilling of bitumen fuels, oils and other pollutants shall be cleared up.
- (g) The Contractor's attention is drawn to the requirements of the Standard Specification in regard to the environment and in particular to the following clauses:

Clause 115: Construction Generally

Clause 116: Protection from Water

Clause 136: Removal of Camps

Clause 605: Safety and Public Health Requirements Clause

Clause 607: Site Clearance and Removal of Topsoil and Overburden

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

SECTION 2: MATERIALS AND TESTING OF MATERIALS

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

SECTION 3: SETTING OUT & TOLERANCES

301 SETTING OUT

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

The road reserve boundary posts shall have 12mm diameter steel pins embedded in concrete, 200mm long with 25mm exposed to the air, sticking out from its top surface. This pin shall be coordinated and heighten and result of the same shall be provided to the Engineer for approval. Cost of these works shall be included in the rates as no separate item has been provided.

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

b) **Detailed Setting Out**

The reference peg shall be 50mm by 50mm in section, 600mm long and driven 400mm firmly into the ground and painted white above the ground. The offset from the center line shall be indicated by small nail 20mm to 25mm long with its head 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.

SECTION 4: SITE CLEARANCE AND TOPSOIL STRIPPING

401 SITE CLEARANCE

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

04 – 50 – 002: Grass Cutting (Manual)

Grass shall be defined as any form of plant growth including small shrubs having a girth of not more than 100mm measured at height of 150mm above ground level.

The grass shall be cut to height of not more than 50 mm above the ground. The width limits shall be as instructed by the Engineer. All cut grass shall be removed from the carriageway, side drains, mitre drains and inlets and outlet drains of structures/culverts and deposited in approved spoil dumps.

Burning of the grass shall not be allowed and care shall be taken not to damage roadside fixtures such as signs and marker posts.

This activity shall be carried out twice, each time before the rainy season or as shall be instructed by the Engineer.

Work Method:

The Contractor shall use labour to carry out this item of work.

Quality Control:

The road width for grass cutting shall be measured using tape measure at 50-m intervals and shall be visually checked to be free of grass after the operation.

Measurement: m²

The unit of measurement shall be square metres of grass cut.

Payment

The unit rate shall be full compensation, for labour, materials, tools, equipment and any incidental costs required to carry out the prescribed works.

04 – 50 – 003: Bush Clearing

This activity involves removal of small trees, shrubs and bushes all including their root system so as to prevent re-growth. In addition, the Engineer may order the trimming of branches of large trees so as to improve visibility. The width limits shall be as instructed by the Engineer.

The cut down material shall be collected into heaps away from the side drains and where it shall not block or interfere with visibility problems.

Burning of cut bush and removed trees or branches shall not be allowed.

Work Method:

The contractor shall use Labour to carry out this item work.

Quality Control:

The width for bush clearing shall be measured using a tape at 50m intervals and shall be visually confirmed to be free of trees or bushes.

Measurement: m²

The unit of measurement shall be the area in square metres.

Payment:

The unit rate shall be the full compensation, for labour, materials, tools, and any incidental costs required to carry out the prescribed works.

402 REMOVAL OF TOPSOIL

Topsoil shall include removal of up to 200mm depth of any unsuitable material as directed by the Engineer.

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

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

04– 50 – 008: Clearing of Obstructions

This activity shall involve to the following tasks:-

- Inspection of the road section(s) included in the contract daily.
- Removal of all obstruction such as fallen trees/ branches, rock fall, landslides, broken signs,etc. away from the roadway road side drains, mitre drains and other drains, inlets and outlets of drifts, culverts and other structures and the safe disposal thereof outside the road formation width.
- Removal of dead animals' carcasses away for the carriageway and disposing them as directed by the Engineer. Liaison with the Police may be necessary.

Work Method:

The contractor shall use labour to carry out this item of work

Quality Control:

The road section shall be visually checked for any obstruction.

Measurement:

The unit of measurement for this item shall be lump sum per Km for the contract period.

Payment:

The unit rate shall be the full compensation for the provision of labour, and tools necessary to carry out the tasks listed above.

SECTION 5: EARTHWORKS

504 PREPARATION PRIOR TO FORMING EMBANKMENT

Where benching is required for existing pavement to accommodate earthworks subgrade or subbase for widening the road, the rate for compaction of existing ground shall be deemed to cover this activity.

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

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

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

505 CONSTRUCTION OF EMBANKMENTS

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

- (i) All material containing more than 5% by weight of organic matter (such as topsoil, material from swamps, mud, logs, stumps and other perishable material)
- (ii) All material with a swell of more than 3% (such as black cotton soil)
- (iii) All clay of plasticity index exceeding 50.
- (iv) All material having moisture content greater than 105% of optimum moisture content (Standard Compaction)

Subgrade: Shall mean upper 300mm of earthworks either in-situ or in fill and subgrade shall be provided for as part of earthworks operation and payment shall be made as “fill”. The material for subgrade shall have a CBR of not less than 8% measured after a 4-day soak in a laboratory mix compacted to a dry density of 100% MDD (AASHTO T99) and a swell of less than 1%.

Subgrade repair: Where directed by the Engineer, any localized failure in the subgrade shall be repaired by filling in selected soft, hard or natural of minimum CBR 30% and compacted in accordance with clauses in the specifications applying to normal subgrade.

Embankment repair: Where directed by the Engineer, any localized filling in soft, hard or natural; selected material requirements shall be executed with Clause 505.

508 COMPACTION OF EARTHWORKS

At pipe culverts, all fill above ground level around the culverts shall be compacted to density of 100% MDD (AASHTO T.99) up to the level of the top of the pipes or top of the surround(s), if any and for a width equal to the internal diameter of the pipe on either side of the pipe(s) or surround(s) as applicable.

At locations adjacent to structures, all fill above ground level up to the underside of the subgrade shall be compacted to density of 105% MDD (AASHTO T.99). In case of fill around box culverts this should be carried out for the full width of the fill and for a length bounded by the vertical plane passing through the ends of the wing walls.

Notwithstanding the provision of clause 503 of the standard Specification, Compaction of subgrade material (i.e. material immediately below formation) in cut areas shall not be carried out by the contractor in areas where

the formation is formed in hard material, unless the Engineer issues specific instructions to the contrary are issued.

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

511 BORROW PITS

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

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

04- 70 - 001: Grassing (Repair of erosion on shoulders / planting of grass)

This activity shall involve protection / repair of erosion on embankment slopes, cut faces, shoulders, side slopes by filling with suitable soils and compacting using appropriate tamping tools as instructed by the Engineer.

Contractor shall plant turf of approved indigenous 'runner' type grass. The Contractor shall care for and water the grass until it is firmly established.

Work Method:

The contractor shall use Labour or equipment carry out this item work.

Quality Control:

- The width of the slope shall be measured at 50m intervals and shall have maximum tolerances of + / - 100mm.
- The quality of grass and spacing of the sprigs shall be visually checked

Measurement: m²

The unit of measurement shall be total area in square meter calculated as the net area, measured on the slope.

Payment:

The unit rate shall be full compensation, for labour, materials, tools, and any incidental costs required to carry out the prescribed works.

517 MEASUREMENT AND PAYMENT

Notwithstanding the provisions of clause 517 of the standard specifications, the rate for compaction of fill in soft material shall allow for the requirements of clause 508 of the special specification and no extra payment shall be made for compaction around pipe culverts (100% MDD AASHTO T.99).

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

601 GENERAL

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

The contractor will be entirely responsible for locating suitable sources of materials complying with the Standard and Special Specifications, and for the procurement, Wining, haulage to site of these materials and all costs involved therein. During the pre-tender site visit, KWS will determine the source of the construction materials (**rocks, sand, gravel, soil and water**). Where the materials are to be sourced within the park, the bidders must adhere to KWS Environmental Guidelines, whereas if the materials are to be sourced from outside the park, the bidders must comply with the Environment and Management Coordination Act (EMCA) 1999, revised in 2015.

Similarly, the contractor will be responsible for the provision and costs involved in providing suitable areas for stockpiling materials and spoil dumps. Should there be suitable sites for spoil dumps or stockpiles within the road reserve forming the site of the works the Contractor may utilize these subject to the approval of the Engineer.

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

SECTION 7: EXCAVATION AND FILLING FOR STRUCTURES

703 EXCAVATION OF FOUNDATIONS FOR STRUCTURES

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

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

707 BACKFILLING FOR STRUCTURES

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

709 EXCAVATION FOR RIVER TRAINING AND NEW WATER COURSES

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

710 STONE PITCHING

Stone pitching to drains, inlets and outlets of culverts to embankments and around structure shall consist of sound unweathered rock approved by the Engineer.

The stone as dressed shall be roughly cubical in shape with minimum dimensions of 150 x 150mm for normal thickness of stone pitching.

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

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

The Works shall involve, removal of the damaged stone pitching and reconstruction of the said areas in accordance with Clause 710 of the Standard Specifications by use of the sound salvaged material together with any necessary additional material where all such materials shall comply with Section 7 of the Standard Specifications.

Contrary to Clause 713 of the standard specifications, the rates inserted for stone pitching shall allow for grouting.

711 GABIONS

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

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

The Works shall involve removal of the damaged gabions / rocks, excavation to the correct levels and grades as directed by the Engineer, and in accordance with Clause 711 of the Standard Specifications and reconstruction

with new gabions and other necessary materials as necessary. The damaged gabions shall be recovered and handed over to the client on site.

712 RIP-RAP PROTECTION WORK

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

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

714 BACKFILL BELOW STRUCTURES

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

SECTION 8: CULVERTS AND DRAINAGE WORKS

801 SCOPE OF SECTION

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

In addition, this Section covers: -

- Installation of 450 mm, 600 mm, 900mm or 1200mm diameter pipe culverts
- Desilting and cleaning of existing pipes and outfall drains to make them free flowing.

This activity consists of supplying the concrete pipe rings, laying and joining the rings, excavating and backfilling the trench and constructing a ramp over the culvert.

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

This Item consists of excavating trenches for culverts, foundations for head and wing walls and the construction of pipe culverts. The dimension of excavation shall be specified in the Drawings or shall be as directed by the Engineer. The Engineer shall approve all excavation work before the contractor is allowed to proceed with other works.

In the Standard Specifications, make the following amendments: -

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

Removal of Existing Pipe Culverts

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

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

The payment of this work shall be per linear meter of pipes removed, and the volume in m³ of inlet/outlet structure removed. The void left by removal of these pipes shall be carefully preserved to accommodate replacement with 450 mm, 600 mm or 900 mm diameter pipe culverts as shall be directed by the Engineer.

Removal of Other Existing Drainage Structures

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

Excavation for Culverts and Drainage Works

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

805 EXCAVATION IN HARD MATERIAL

In the Standard Specifications, Sub-clauses 805(a) and 805 (b) delete "95%" and insert "100%". In sub-clause 809(a), paragraph 1, line 1, substitute "95%" with "100%". In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 100% MDD (AASHTO T.99)".

Hard material is material which can be excavated only after blasting with explosives or barring and wedging or the use of a mechanical breaker fitted with a rock point in good condition and operated correctly. Boulders of more than 0.2m³ occurring in soft material shall be classified as hard material.

809 BEDDING AND LAYING OF PIPE CULVERTS

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

Pipe culverts shall be haunched using 150mm concrete Class 15/20 surround as per profile IV as indicated in the drawings. Headwalls/Wing walls, toe walls and aprons shall be constructed with class 20/20 concrete.

Backfilling shall be done with approved material and compacted layers not exceeding 150 mm loose. Ramps shall be shaped to achieve a minimum overfill of 3/4 of the pipe diameter.

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

810 JOINTING CONCRETE PIPES

The pipe rings shall be of Class 20 concrete, at least 28 days cured and manufactured on site or procured from a supplier approved by the Engineer.

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

812 BACKFILLING OVER PIPE CULVERTS

In the Standard Specifications, clause 812:

- a) Delete paragraph 6 "for pipe culverts depth of 150mm", entirely.
- b) Wherever the expression "dry density of 95% MDD (AASHTO T. 99)" appears delete and replace with "dry density of 100% MDD (AASHTO T.99)".

The rates entered for laying of pipe culverts shall allow for backfilling to pipe culverts and compacting to 100% MDD (AASHTO T.99) and these works shall be deemed included in the contractor's rate and shall not be measured and paid for separately.

Quality Control:

- The dimensions of the trench shall be checked using tape measure and shall have a tolerance of + / - 50mm.
- The invert level shall be checked using line and level and shall have a tolerance of + / - 50mm.
- The trench bottom shall be checked using straight edge, spirit level and shall have a tolerance of + / - 10mm.
- Culvert quality shall be checked visually for cracks, honey combing etc.
- The length of each pipe shall be checked using tape measure and shall have a tolerance of + / - 10mm.
- Before the pipes are laid, the gradient of the culvert trench shall be checked using boning rods and line levels and shall have a tolerance of + / - 1%.
- The joint shall be visually checked to have been properly made properly made

Measurement: m

The unit of measurement shall be in linear metres of installed size of culvert specified.

814 SUBSOIL DRAINS

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

These drains shall consist of a trench excavated to the alignment, width, depth and gradient instructed by the

Engineer, and backfilled with approved compacted clean hard crushed rock material as specified in clause 815 of the standard specification. Where these drains lie within the carriageway the carriageway shall be reinstated with compacted graded crushed stone or stabilised gravel and surfaced with hot asphalt or a surface dressing as instructed by the Engineer.

Payment will be paid in accordance with Clause 814 of the Standard Specification.

817 REPAIRS TO DRAINS

08 – 70 – 001/2: Provide material to reconstruct or repair headwall, and wing wall

i). Stones, ii) Concrete blocks

This activity shall include provision of all materials required and to carry out repairs to damaged head walls and wing walls as shown in the drawings and as instructed by the Engineer.

Work Method:

The contractor shall use Labour to carry out this item of work Quality Control

- The dimension of the headwalls shall be checked with tape measure and shall have maximum tolerances of + / - 50mm.
- The levels shall be checked with line levels, straight edge and spirit levels and shall have maximum tolerance of + / - 20mm.

Measurement: m²

The unit of measurement shall be square metres for masonry paid for on the basis of area of wall completed while the concrete works shall be cubic meters paid for on the basis of volume of concrete poured in the wall.

Payment:

The unit rate shall be full compensation for labour, materials equipment, tools, material haulage and unloading as required to carry out the prescribed works.

08 – 70-003: Provide material to reconstruct headwall, wing wall

i) Stones, ii). Concrete blocks

This item consists of provision of material and construction of masonry walls as detailed in the drawings.

Work Method:

The contractor shall use both labour and equipment to carry out this item work

Quality Control:

- The dimensions of the structure shall be checked using tape measure and shall have a tolerance of + / - 10mm.
- The levels shall be checked using line and level, straight edge and spirit level and shall have a tolerance of + / - 10mm.
- The quality of the mortar joints shall be checked visually.

Measurement: m²

The unit of measurement shall be the total area in square metres of wall constructed.

Payment:

The unit rate shall be the full compensation for labour, material, equipment and any other incidentals that may be required in carrying out the work as prescribed.

08 – 70-004: Provide material and construct headwall, wing wall and apron – Concrete

This work consists of provision of all materials, and construction of the structures as detailed in the drawings. Aprons shall be constructed using concrete. Concrete shall be class 20/20 unless otherwise specified.

Work Method:

The contractor shall use both labour and equipment to carry out this item work.

Quality Control:

- The dimensions of the structure shall be checked using tape measure and shall have a maximum tolerance of + 20mm / - 10mm.
- The workability and mix of concrete shall be checked using the slump test and shall have a maximum tolerance of + / - 25mm of slump. The frequency of testing shall be determined by the Engineer.
- The concrete shall be visually checked for any cracks or honey combing.

Measurement: m³

The unit of measurement shall be the total volume in cubic metres of concrete.

Payment:

The unit rate shall be the full compensation for labour, material, equipment and any other incidentals that may be required in carrying out the work as prescribed.

08 – 70-005/010: Provide and install or repair scour checks

i) – Stone; ii). - Wooden stakes; iii) - Concrete

Scour checks shall be constructed or repaired using either stones or sticks, as instructed by the Engineer. Construction of concrete scour checks shall be in class 20/20 concrete unless otherwise specified and as per the details shown in the drawings.

Spacing for scour checks depends on the gradient of the drain as given in the guidelines shown in **Table 8.1**.

Table 8.1: Scour checks spacing

Gradient of Drain	Scour Check Spacing	Gradient of Drain	Scour Check Spacing
4% or less	not required	8%	7.5m
5%	20m	9%	6m
6%	15m	10%	5m
7%	10m	>10%	4m

Work method:

The contractor shall use labour to carry out this item work.

Quality Control:

- The spacing of the scour checks shall be checked using tape measure and shall have a tolerance of + / - 0.5m.
- The sizes of the stakes and stones used shall be visually checked.
- The shape of the scour check shall be checked using the scour check template.

Measurement: m³

The unit rate of measurement shall be cubic meters of the material used to construct the scour checks.

Payment:

The unit rate shall be full compensation, for labour, materials, equipment, haulage and any incidental costs required for carrying out the prescribed works.

817.1 Cleaning Existing Drains

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

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

- (c) Shaping the drains to free flowing condition.
- (d) Removing any obstruction materials in the drains.
- (e) Cleaning any closed structures including cross culverts of any size to free flowing conditions.

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

08 – 50 – 002: Cleaning of the Side Drains / Catch water drains partially silted

- Partially silted drain shall be that drain that is less than half silted and requires only cleaning.
- All deposited material, debris, and vegetation shall be removed and the drain shaped to the original cross-sectional standard and shall be in a free-draining condition.
- All debris and other unsuitable material removed from the side drains shall be disposed well clear of the drainage system in approved spoil dumps where it cannot cause any obstruction or be washed back.
- The side drains shall be cleaned before the onset of the rains. The Engineer may instruct the contractor to clean the side drains immediately after heavy downpours.

Work Method:

The contractor shall use labour and or equipment to carry out this item work.

Quality Control:

- Appropriate drain templates shall be used to check and control the dimension of the drains.
- The longitudinal profile of the drains shall be checked using boning rods, string and line-level.

Measurement: m

Payment:

The unit rate shall be full compensation, for labour, tools, and any incidental costs required to carry out the prescribed works.

08 – 50 – 002: Desisting / Reshaping of the Side Drains / Catch water Drains Fully silted

- Fully silted Catch water or side drain shall be that drain that is greater than half-silted and requires re excavation or reshaping.
- All deposited material, debris, and vegetation shall be removed and the drain shaped to the original cross-sectional standard and shall be in a free-draining condition.
- All debris and other unsuitable material removed from the side drains shall be disposed well clear of the drainage system in approved spoil dumps where it cannot cause any obstruction or be washed back.
- The side drains shall be desilted or re-excavated before the onset of the rains and during grading

Work Method:

The contractor shall use Equipment and or Labour as directed to carry out this item work. Reshaping of the side drain shall be done together with the carriage way.

Quality Control:

Appropriate drain templates shall be used to check and control the dimension of the drains.
The longitudinal profile of the drains shall be checked using boning rods, string and line-level.

Measurement for works on catch water drain: m³

Under this item the unit of measurement shall be the total volume in cubic metres of excavated material, excavated in its original position.

Measurement for works on side drain:

Under this item measurement shall be considered in the grading works except when the work is order by the Engineer where no grading or gravelling is required on the pavement. In such case the unit of measurement shall be the total volume in cubic metres (m³) of excavated material, excavated in its original position.

Payment:

The unit rate shall be full compensation, for labour, tools, and any incidental costs required to carry out the prescribed works.

08 – 50 – 005: Cleaning of Mitre drains partially silted

- Partially silted drain shall be that drain that is less than half silted and requires only cleaning.
- All silt, debris, and vegetation shall be removed and the drain shaped to the instructed cross-section and be in a free-draining condition. All debris and other material removed from the mitre drains shall be disposed away and clear of the drainage system in approved spoil dumps to prevent debris from being washed back.
- The mitre drains shall be cleaned before the onset of the rains.

Work Method:

The contractor shall use Equipment and or Labour as directed to carry out this item work.

Quality Control:

- Appropriate drain templates shall be used to check and control the dimension of the drains.
- The longitudinal profile of the drains shall be checked using boning rods, string and line-level.

Measurement: m

Under this item the unit of measurement shall be the total length in linear metres of the drain cleaned.

Payment:

The unit rate shall be full compensation, for labour, tools, and any incidental costs required to carry out the prescribed works.

08 – 50 – 005a: Cleaning of Mitre drains fully silted

- Fully silted drain shall be that drain that is greater than half-silted and requires re excavation or reshaping.
- All silt, debris, and vegetation shall be removed and the drain shaped to the instructed cross-section and be in a free-draining condition. All debris and other material removed from the mitre drains shall be disposed away and clear of the drainage system to prevent debris from being washed back.
- The mitre drains shall be cleaned before the onset of the rains.

Work Method:

The contractor shall use Equipment and or Labour as directed to carry out this item work

Quality Control:

- Appropriate drain templates shall be used to check and control the dimension of the drains.
- The longitudinal profile of the drains shall be checked using boning rods, string and line-level.
- Siltation/Obstructions must be less than 50mm in depth
- The longitudinal profiles mitre drains shall be checked using boning rods and shall have tolerances of +/- 25mm;
- The dimensions of the mitre drains shall be checked using template and tape measure and shall have tolerances of +20mm or -10mm;
- The location of the mitre drains shall be checked visually.

Measurement: m³

Under this item the unit of measurement shall be the total volume in cubic metres of excavated material, excavated in its original position.

Payment:

The unit rate shall be full compensation, for labour, tools, and any incidental costs required to carry out the prescribed works.

817.2 Channels

The Engineer may instruct that the Contractor provides open channels in place of existing subdrains where the latter may be damaged or in any other place. The rates entered by the Contractor in the bills of quantities must

include for removal and disposal of any subdrain material, excavation to line and level, backfilling and compaction as directed by the engineer. The channels shall be constructed of precast class 20/20 concrete of minimum 80mm thickness and lengths or widths not exceeding 1000mm. Joints shall be at least 15mm wide filled with 1:2 cement sand mortar.

817.3 Ditch/Mitre/Catch water drains

The cross section details shall be provided in the drawings or shall be as directed by the Engineer. In steep gradient scour checks may be installed in the catch water drains and grass cover shall be encouraged to grow in the drain. The excavated material shall be deposited at the lower (valley) side of the drain.

The location of the drains shall be checked and approved by the Engineer before construction;

The cross section dimensions shall be checked using tape measure at 25 m intervals and tolerances shall be +/- 25mm

Work Method

The contractor shall use Labour or Equipment to carry out this item work. Measurement: m³

The unit of measurement shall be cubic metres of materials excavated. Payment

The unit rate shall be full compensation for labour and any incidental costs required for carrying out the prescribed works

817.4 Rubble Fills for Protection Work

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

817.5 Stone Pitching

Stone pitching shall be constructed in accordance with clause 710 of the standard Specification.

817.6 Gabions

Gabions shall be constructed in accordance with clause 711 of the standard Specification.

817.7 Spoil Material

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

819 CLEANING AND MAINTENANCE

819.1 De-silting of Pipe Culverts

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

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

08 – 60 - 001/2/3/4/5: Cleaning Culverts / Structures, inlet/outlets (Partially blocked)

08 - 60 - 001	300mm dia;
08 - 60 - 002	450mm dia;
08 - 60 - 003	600mm dia;
08 - 60 - 004	900mm dia;
08 - 60 - 005	1200mm dia

- This activity shall involve the cleaning of culverts of specified size including pipe barrels and the outlet/inlet structures, and the outlet drains, keeping them free of all debris, weed, silt and any obstruction to ensure free passage of water at all times.
- The debris shall be deposited in approved spoil dumps directed by the Engineer.
- Partially blocked culverts shall be considered as pipe culverts with less than half the barrel-blocked.
- Correct widths and slopes of the outlet drains shall be maintained.
- The gradient of the outlet drain shall be checked to ensure it is greater than 2 % using boning rods, line

and level.

- All broken culvert barrels discovered in the course carrying out this activity shall be reported to the Engineer. This activity should be carried out before the rains.

Work Method:

The contractor shall use labour to carry out this item of work.

Quality Control:

The workmanship shall be visually checked and shall be clean and free of obstacles

Measurement: m

The unit of measurement shall be linear metre of culvert line including outlet drain cleaned.

Payment:

The unit rate shall be full compensation for labour, tools, as required to carry out the prescribed works.

08 – 60 - 006/7/8/9/10 : Desilting Culverts / Structures inlet/outlets (Fully blocked)

08 - 60 - 006 300mm dia;

08 - 60 - 007 450mm dia;

08 - 60 - 008 600mm dia;

08 - 60 - 009 900mm dia;

08 - 60 - 010 1200mm dia

- This activity involves the cleaning of culverts of specified size including pipe barrels and the outlet/inlet structures, and the outlet drains, keeping them free of all debris, weed, silt and any obstruction to ensure free passage of water at all times.
- The debris shall be deposited in approved spoil dumps directed by the Engineer. Fully blocked culvert shall be considered as pipe culvert with greater than half-of the barrel blocked.
- Correct widths and slopes of the outlet drains shall be maintained.
- The gradient of the outlet drain shall be checked to ensure it is greater than 2 % using boning rods, line and level
- All broken culvert barrels discovered in the course of carrying out this activity shall be reported to the Engineer.

Work Method:

This activity should be carried out before the onset of the rains.

Quality Control:

The workmanship shall be visually checked.

Measurement m³:

Under this item the unit of measurement shall be cubic metres of material, excavated. The workmanship shall be visually checked and shall be clean and free of obstacles.

Payment:

The unit rate shall be full compensation for labour, and tools required to carry out the prescribed works

SECTION 9: PASSAGE OF TRAFFIC

901 SCOPE OF THE SECTION

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

The contractor shall provide to the satisfaction of the Engineer adequate warning signs, temporary restriction signs, advance warning signs, barriers, temporary bumps and any other device and personnel shall be properly positioned well in before work is allowed to start. Signs and traffic control shall be kept in good condition and be clear to all road users to ensure the safe passage of traffic through the works. When carrying out the Works the Contractor shall have full regard for the safety of all road users.

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

Warning signs, fences, barriers, detours, etc. shall be properly positioned well in advance so that all traffic has been well and safely accommodated before work is allowed to start. Payment shall be per unit km rate through the works.

SECTION 10: GRAVEL WEARING COURSE

1001 GENERAL

The road carriageway shall be constructed in accordance with the provisions of Section 10 of the Standard Specifications. Borrow pits and spoil areas shall comply with all the requirements of Section 6 of this specification in respect of borrow pits and spoil areas.

1002 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 300mm with a single tine hydraulic ripper acceptable to the Engineer. The material shall have a minimum CBR of 20 at 95% MDD (AASHTO T180) and four days soak.

Where directed by the Engineer new gravel will be added to the existing gravel to have the required thickness of wearing course. The existing gravel wearing course shall be cut by ripping top of the roadway to a depth of 150mm with a single tine hydraulic ripper acceptable to the Engineer.

The scarification, watering, mixing, shaping and compaction of the top 150mm of roadway materials to 95% MDD (AASHTO T99) if watering and compaction is specified. In this case the Engineer should direct the contractor to mix in any additional material. Both new and existing gravel will be mixed and bladed back over the roadway, and recompact in accordance to the requirements given in Clause 1003 of the MOPWH Standard Specification. And such gravel shall be paid for separately under the relevant pay item allowed in the Bill of Quantities.

However, where there is existing gravel wearing course, the Engineer may instruct that the Contractor blade aside and stockpile the wearing course material before commencing any of the works under this item. The contractor shall take such care as to ensure that the stockpiled gravel is not contaminated with sub grade materials, topsoil or organic material.

After carrying out the work defined in part 10.-50.004 (a) to (d), the contractor shall compact the formation to 95% MDD (AASHTO T99). If necessary to achieve the desired compaction, the Contractor shall scarify the formation level to a depth of 150mm, water to obtain the required moisture content, reshape and finally re-compact the material.

The gravel-wearing course shall then be bladed back over the formation to a constant thickness and re-compact in accordance with the requirements given in Clause 1003 of the MOPWH Standard Specification. Wherever the existing roadway width is less than specified in the document the contractor shall, if instructed by the Engineer, widen the roadway to obtain this minimum width, and excavate ditches to the template shown in the Drawings or as directed by the Engineer. Any widening works shall be paid for separately and in addition to the payment for Light Reshaping, under the appropriate earthwork item.

Quality Control:

The material may be obtained from borrow pits or excavation in cuttings. The plasticity requirements and the class of material shall be as specified in **Table 10.1** and the Special specification.

Table 10.1: Requirement for Gravel Wearing Course

GRADING REQUIREMENTS AFTER COMPACTION	
Sieve (mm)	% by Weight Passing
40	100
28	95 - 100
20	85 - 100
14	65 - 100
10	55 - 100
5	35 - 92
2	23 - 77
1	18 - 62
0.425	14 - 50

PLASTICITY INDEX REQUIREMENTS PI		
Zone	Min	Max
WET	5	15
DRY	10	25

BEARING STRENGTH REQUIREMENTS		
Traffic Commercial VPD	CBR	DCP Equivalent mm/Blow
Greater than 15	20	11
Less than 15	15	14
CBR at 95% at MDD, Modified AASHTO and 4 days soak		
Lower quality material (CBR 15) may be accepted if no better material can be found		

Note: **Wet Zone** - mean annual rainfall greater than 500 mm.

Dry zone - mean annual rainfall less than 500 mm.

The Contractor shall be responsible for the acquisition of the quarry rights and shall therefore conduct respective negotiations with landowners and affected communities. The Engineer shall approve quarries and their extent of exploitation.

Alternative sources of gravel material whose quality can be shown to be in compliance with the specification requirements may be used, with the provision that the Employer is not to incur additional expenses in connection with its winning and haulage. Contractor is deemed to have included in his rates for the provision of the gravel material to have included the cost of complying with the testing requirements.

10.-.50 - 004 - Light Grading

Grading covers the works involved in the reinstatement of the road carriageway to the camber by removing the high points and filling up gullies corrugations and wheel ruts to restore smooth running surface.

Light grading shall only be undertaken where ordered by the Engineer.

Light grading is the restoration of the road profile and existing side drainage/mitre drains including the shaping of the formation, recompaction and, if applicable, the reshaping and recompaction of the gravel wearing course.

These operations shall be carried out using the following plant:

- a motor grader of at least 120 HP (for light grading alone).
- a roller, sufficient to achieve the required compaction (if compaction required it shall be included in the BOQ's).
- a water tanker to obtain the required moisture content for compaction. if watering required it shall be included in the BOQ's).

The works to be carried out under this item are as follows.

- Removal of vegetation, topsoil and landslips from within the limits of the roadway and side drains, whatsoever the width.
- The reshaping of the longitudinal profile of the roadway, including the removal of ruts, humps and windrows, and the filling of potholes.
- The reshaping of the roadway and ditches to the specified cross-section template, as directed by the

engineer, including the reinstatement of existing side ditches and mitre drains.

- (d) The clearing of all loose material from side slopes to fills and cuts.

10.-50.002 Heavy grading

Heavy Grading shall only be undertaken when directed by the Engineer.

Heavy Grading is the restoration of the road profile, template and side ditches and involves operations similar to what is required for Light Grading. Heavy grading demands the following works in addition to the works specified above Light grading:

- (a) Correction of undulations, deep rutting, and gullies whatever their depth;
- (b) The drainage of quagmires; the removal and disposal of water logged material;
- (c) The clearance of landslips from the roadway and ditches;
- (d) Where directed by the Engineer, the widening of the roadway by either cutting or filling, or both.
- (e) The improvement of the longitudinal profile of the road by the excavation of humps and the filling of holes and depressions.

The following equipment shall be used in this works:

- a motor grader of at least 120 HP
- a bulldozer of at least 150 HP
- a water tanker
- a self-propelled roller of at least 10 tonnes dead weight, or a vibrating roller of at least 3 tonnes dead weight.

Any fill required for the reshaping of the road profile, the elimination of ruts, gullies and holes and the replacement of waterlogged material shall be obtained from either within the road prism or from cut slopes and adjacent to the road, provided that the material conforms to the requirements of this Specification and meets with the approval of the Engineer.

Any excavation in hard material will be deemed to be in addition to the work requirements for Heavy Reshaping and will be paid for separately under the appropriate earthworks item.

Table 10.2: Overall widths ditch to ditch (guidelines)

Road Category	Carriageway width	Overall width to front of Ditches
A/B/C + Secondary Roads	6.0 m	8.4 m
D/E + Minor Roads	5.4 m	7.8 m
RAR Roads	4.5 m	6.5 m
Minor / RAR roads with insufficient widths or Temporary Sections	3.5 m	5.5 m

Work Method:

The contractor shall use equipment to carry out this item work.

Quality Control:

a) Grading

- Gradient of the ditch shall be checked at 20m interval using boning rods and shall drain to the natural drainage channels or mitre drains placed at regular intervals.
- The width of the carriageway (see table 10.2) shall be checked using tape measure at every 50m

with tolerance of +50mm or -20mm

- The camber shall be checked using camber board at every 50m with and shall have a tolerance of +/- 1% Compaction

b) Compaction

Compaction of the reshaped or reformed road shall be by not less than 8 passes as and directed by the Engineer depending on the compaction equipment used. Unless otherwise instructed, the moisture content at the time of compaction shall be within the range of +/- 2% of the optimum moisture content.

Where water needs to be added, it shall be applied in an even manner and the rate of application shall be such that no traverse or longitudinal flow occurs. The Contractor is required to provide all water for compaction and shall include this in his or her rates.

- Unsuitable material should not be used;
- Compaction shall be carried out using either dead weight or pedestrian rollers of approved weight and dimensions.
- The minimum passes of compaction to be applied shall be that which no more roller imprint on the surface can be seen and to a minimum dry density as given in **Table 10.3** below;
- The camber shall be checked at 100m intervals using camber board and a line level and shall not be less than 5 % with a tolerance of +/- 1%
- Material for compaction shall be placed in layers of 200mm loose depth unless otherwise directed. The layers shall be parallel to the top of the subgrade level.

Table 10.3: Minimum dry density

Layer location.	Minimum compaction
Excavation to level platform	95% MDD (AASHTO T99)
Road formation and fill material	100% MDD (AASHTO T99)
Gravel wearing course	95% MDD (AASHTO T180)

Measurement: **m²**

The unit of measurement for mitre drains and compaction shall not be paid for separately and shall be deemed to be covered in his rates for grading

Payment:

The unit rate compaction shall be the full compensation for labour, equipment and any incidental costs required for carrying out the works to the required specifications.

SECTION 11: SHOULDERS TO PAVEMENT

1101 GENERAL

Shoulders shall be constructed in accordance with guidelines given in 1102 and as directed by the Engineer.

For sections where shoulders are extremely low and requires fill material before the shoulder is reconstructed, the construction of fill embankment shall be in accordance with Section 5 of this specification.

1102 MATERIAL FOR CONSTRUCTION OF SHOULDERS

The shoulders shall be 1.0m wide both sides and shall be formed of 150mm thick well compacted soft stone material and topsoiled with red coffee soil and planted with grass.

Low shoulder shall be reconstructed by cutting benches, filling and compacting approved fill material to form the formation to the shoulders.

Shoulder reconstruction shall be same in all sections including the slip roads.

1105 SURFACE TREATMENT OF SHOULDERS

The shoulders shall be planted with creeping type kikuyu grass.

1106 MEASUREMENT AND PAYMENT

Payment for shoulder construction shall be in accordance with the relevant clauses in sections 11, 12, 14, 15 and 23 of the relevant Specifications. Payment for fill material on shoulder shall be in accordance with Section 5 of this specification.

SECTION 12: NATURAL MATERIAL SUB-BASE AND BASE

1201 GENERAL

(a) Definitions

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

(b) Sources of materials

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

- (i) Borrow pits
- (ii) Spoil areas
- (iii) Excavation in cuttings, widened if necessary.

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

(c) Inspection of site

Where a source of material is available for inspection during the Tender Period the Contractor shall satisfy himself as to the nature and amount of work involved particularly in respect of the volume of overburden, the quality and hardness of material, the degree of selection necessary, the method of extraction, and access to the source.

(d) Borrow pits

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

1202 CLASSIFICATION OF MATERIAL

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

The material may require the use of either a grid or sheep foot roller with more than 8,000kg mass per metre width of roll to break it down and/or screening to achieve the specified grading.

1203 MATERIAL REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 10%

- Plasticity Modulus : Maximum 250
- LAA : Maximum 70%
- CBR (4 days soak) : Minimum 60%

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Material for CIG 160 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the requirements given in Section 1203(d) of the Standard Specifications for Road and Bridge Construction but shall have Plasticity Index not exceeding 20% and 4 day soak CBR of at least 25%.

SECTION 14: CEMENT AND LIME TREATED MATERIALS

1401. CEMENT TREATMENT

Cement for stabilisation will be Ordinary Portland Cement to KS EAS 18-1 and KS EAS 18-2 CEM 1 and clause 207 of the Standard Specifications. The cement content of the treated material shall be as indicated by the Engineer and will normally be about 4%. The Engineer shall exercise his discretion to any variation in the rate of application of the cement, which he may see fit, to order from time to time.

Moisture Content

The moisture content of the stabilized material shall be as directed by the Engineer but nevertheless within the range of 85% to 100% of the optimum Moisture Content (AASHTO T.180)

Mixing and Placing

The material to be stabilized and the cement shall be mixed by an approved mixing plant, which will either be a mix-in-place pulvi-mixer or a stationary mixing plant for material to be used for pavement reconstruction, widening and shoulders.

1403. LIME IMPROVEMENT

Lime improvement shall be carried out in accordance with Section 14 of the Standard Specification. The lime content of the stabilized material shall be as indicated by the Engineer.

1409. PROTECTION & CURING

Protection and curing shall be carried out in accordance with the provisions of Clause 1409(i) of the Standard Specification but provision shall be made to wet the surface from time to time as directed by the Engineer.

1410. TRAFFIC

The requirements of clause 1410 of the Standard Specification will not apply to improved natural material utilized for patching and repair works but will apply in case reprocessing of reconstruction and widening of the existing base and shoulders.

1412 Measurement & Payment

Stabilizer

The provision of the stabilizer shall be measured by the tonne calculated as the specific weight of stabilizer added to the material.

Mix-in stabilizer

Mixing stabilizer into the material shall be measured by the cubic metre of treated material calculated as the product of the compacted sectional area treated and the length.

SECTION 15: BITUMINOUS SURFACE TREATMENTS

PART A - GENERAL

1501A GENERAL

Details of the spray rates for bitumen and the spread rates for chippings will be directed by the Engineer but the under listed is anticipated and can be used for guidance purpose i.e.

a. Chippings

- 14/20mm size pre-coated chippings at a spread rate of 75-90 square meters per cubic meter as first seal.
- 10/14mm size pre-coated chippings at a spread rate of 80-100 square meters per cubic meter as single seal.
- 6/10mm size pre-coated chippings at spread rate of 100-130 square meters per cubic meter as second seal.

b. Bitumen Spray Rates

- 1.1 – 1.3 l/m² for the first seal
- 0.9 - 1.1 l/m² for the second seal

The Average Least Dimension (ALD) shall be determined in the field after crushing the rock for chippings and then determine the actual spray rates and chipping spread rates

1501B PREPARATION OF SURFACE

In addition to requirements of Clause 1503B of the Standard Specifications, the contractor shall prepare and Repair Cracks, Edges, Potholes and Other Failures as follows: -

a) **Cracks 3.0mm or less in width**

The entire crack area shall be cleaned by brushing with a wire brush and then blowing with a compressed air jet and the crack sealed with 80/100 cutback bitumen using a pouring pot or pressure lance and hand squeegee. The surface shall then be dusted with sand or crushed dust.

b) **Cracks greater than 3.0mm in width**

Before these cracks are filled a steel wire brush or router shall be used to clean them and then a compressed air jet shall be used to clean and remove any foreign or loose material in the crack until the entire crack area is clean.

When the crack and surrounding area have been thoroughly cleaned, dry sand shall be forced into the crack until it is sealed in the manner specified for cracks less than 3.0mm width.

c) **Potholes, edges and other repair areas**

Where instructed, the Contractor shall prepare areas for the repair of potholes, road edges and other repair areas by excavating off unsuitable or failed material and debris, trimming off excavated edges, cleaning and compacting the resulting surfaces and applying MC 30 or MC 70 cut-back bitumen prime coat at a rate of 0.8-1.2 litres/m², all as directed by the Engineer.

Measurement and payment shall be made under the relevant item of Bill No 15. Where the surface repair on potholes and edges are to be carried out, Asphalt Concrete Type I (0/14 gradation) shall be used. Bituminous material for repair of failures and other repair areas shall be paid for under the relevant item of Bill No 16.

PART B - PRIME COAT

1502B MATERIALS FOR PRIME COAT AND TACK COAT.

For prime coat, the binder shall be a medium-curing cutback MC 30 unless otherwise directed by the Engineer.

The rate of spray of bituminous prime coat refers to the gross volume of the cutback bitumen, that is to say the volume of the bitumen plus dilutants.

Prime coat shall be applied to all gravel areas that are to receive bituminous mixes as directed by the Engineer.

The tack coat shall consist of bitumen emulsion KI-60 unless otherwise directed by the Engineer.

The rates of spray of the binder shall be as instructed by the Engineer and shall generally be within the range 0.8-1.2 litres/square metre.

The rates of spray of the tack coat shall be as instructed by the Engineer and shall generally be within the range 0.5-0.8 litres/square metre.

PART C – SURFACE DRESSING

1502C MATERIALS FOR SURFACE DRESSING

a) Binder

The bituminous binder shall be 80/100 penetration grade bitumen cut-back with kerosene fuel in accordance with prevailing road temperatures, and conforming to Clause 211 of the Standard Specification.

b) Chippings

Chippings shall be of class 2 material and shall comply in all respects with Clause 1502C of the Standard Specification. The contractor's attention is drawn to the requirements of Clause 1502C and 1504C of the Standard Specification with regard to cleanliness and dust content of chippings for surface dressing. Should it prove necessary in the Engineer's opinion to wash chippings, no extra payment will be made to the contractor for this operation.

1503C SPRAY AND SPREAD RATES OF BITUMEN AND CHIPPINGS

Spray and Spread Rates for bitumen and chippings cannot be calculated until samples of the chippings to be used are available for test.

After submission of samples and completion of laboratory tests on chippings and binder, the contractor shall in the presence of the Engineer and the Chief Materials Engineer or representatives, lay trial sections of seal at various rates of spray and spread as directed by the Engineer and in accordance with clause 1503C of the Standard Specification.

Should any change occur in nature of source of chippings or bitumen, the contractor shall advise the Engineer accordingly who will then decide if any revisions are required to the spray and spread rates.

If any changes are required, the Contractor shall carry out further trials as instructed by the Engineer.

Payment for binder and chippings will be based on the instructed spray and spread rates used which may not necessarily be those specified. The Engineer will specify the spray rates of bitumen as residual bitumen per square meter. Actual spray rates used by the Contractor must be adjusted to compensate for any cutter added.

1505C PRE-COATED CHIPPINGS

Chippings utilized for surface dressing works under this contract shall be pre-coated in accordance with clause 1505C of the Standard Specification. The binder used for pre-coating chippings shall be MC 30 cut-back bitumen.

The amount of bituminous binder used to pre-coat chippings will be as instructed by the Engineer and will normally be between 0.4% and 1.0% residual bitumen as percentage of the total dry weight.

Prior to laying any pre-coated chippings the Contractor shall prepare trial mixes of bitumen and chippings in the presence of the Engineer. After completion of trial mixes the Engineer shall issue written instructions to the Contractor indicating the amount of binder to be added in pre-coated chippings. The Contractor shall maintain this proportion unless the surface or nature of the chippings changes when the Contractor shall repeat the trials and the Engineer will issue revised instruction.

No separate payments shall be made for the pre-coating exercise. The contractor shall have included in his rates the cost of complying with this clause.

1511C MEASUREMENT AND PAYMENT

a) Seal Coat

Seal coats shall be measured by the litre, for each type of bituminous binder for each seal coat, calculated as the product of the area in square metres sprayed and the rate of application in litres/square metres, corrected to 15.6°C.

b) Pre-coated Chippings

Chippings shall be measured by the cubic metre of each nominal size for each class calculated as the product of the area in square metres covered and the reciprocal of the instructed rate of application in square metres/cubic metre or the actual rate of application in square metres/cubic metre whichever calculation gives the lower volume.

SECTION 16: BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES

This section covers different types of bituminous mixes for base and surface (wearing and binder courses) and is divided into the following parts: -

Part A General

Part B Asphalt Concrete for carriageway

Part C Asphalt Concrete for pothole patching

PART A – GENERAL

1601A SCOPE OF PART A

Part A comprises all the general requirements for bituminous mixes, which apply to Part B as well.

1602A REQUIREMENTS FROM OTHER SECTIONS

The following sections of this Specification apply to Part B of this section and shall be read in conjunction with:-

Section 2	Materials and Testing of Materials
Section 3	Setting Out and Tolerances
Section 6	Quarries, Borrow Pits, Stockpile and Spoil Areas Section
Section 15	Bituminous Surface Treatments and Surface Dressing

1603A CONSTRUCTION PLANT

(a) General

The Contractor shall submit to the Engineer in accordance with Section 1 of its Specification, full details of the construction plant he proposes to use and the procedures he proposes to adopt for carrying out the permanent Works.

The Engineer shall have access at all times to construction plant for the purposes of inspection. The Contractor shall carry out regular calibration checks in the presence of the Engineer and shall correct forthwith any faults that are found.

All construction plant used in the mixing, laying and compacting of bituminous mixes shall be of adequate rated capacity, in good working condition, and shall be acceptable to the Engineer. Obsolete or worn-out plant will not be allowed on the work.

(b) Mixing Plant

Bituminous materials shall be mixed in a plant complying with ASTM Designation D995 and shall be located on the Site unless otherwise agreed by the Engineer. It shall be equipped with at least three bins for the storage of heated aggregates and a separate bin for filler. All bins shall be covered to prevent the ingress of moisture.

The plant may be either the batch-mix type or the continuous-mix type and shall be capable of regulating the composition of the mixture to within the tolerances specified in Clause 1614A of this Specification.

The bitumen tank shall be capable of maintaining its contents at the specified temperature within a tolerance of 5°C and a fixed thermometer easily read from outside the tank. Any bitumen that has been heated above 180°C or has suffered carbonisation from prolonged heating shall be removed from the plant and disposed of.

(c) **Laying Plant**

Bituminous materials shall be laid by a self-propelled spreader finisher equipped with a hopper, delivery augers and a heated adjustable vibrating screed. It shall be capable of laying bituminous materials with no segregation, dragging, burning or other defects and within the specified level and surface regularity tolerance. Delivery augers shall terminate not more than 200mm from the edge plates.

(d) **Compaction Plant**

The Contractor shall provide sufficient rollers of adequate size and weight to achieve the specified compaction. Prior to commencing the laying of bituminous mixes in the permanent Works the Contractor shall carry out site trials in accordance with Section 2 of this Specification to demonstrate the adequacy of his plant and to determine the optimum method of use and sequence of operation of the rollers.

It is important to achieve as high a density as possible at the time of construction and it is expected that vibrating rollers will be required to produce the best results. However, it is essential that thorough pre-construction trials are carried out to ensure that:-

- (a) The roller is set up to have the optimum amplitude and frequency of vibration for the particular material being laid
- (b) That the roller does not cause breakdown of the aggregate particles.
- (c) That the optimum compaction temperatures are established which allow compaction without causing ripple effects or other distortions of the surfacing.

1604A PREPARATION OF SURFACE

Immediately before placing the bituminous mix in the pavement, the existing surface shall be cleaned of all material and foreign matter with mechanical brooms or by other approved methods. The debris shall be deposited well clear of the surface to be covered.

Any defect of the surface shall be made good and no bituminous mix shall be laid until the Engineer has approved the surface.

A tack coat shall be applied in accordance with Section 15 of this Specification. If the Engineer considers a tack coat is required prior to laying the bituminous mix or between layers of the bituminous mix, due solely to the

Contractor's method of working, then such tack coat shall be at the Contractor's expense.

1605A DESIGN AND WORKING MIXES

At least two months prior to commencing work using a bituminous mix, the Contractor shall, having demonstrated that he can produce aggregates meeting the grading requirements of the Specification, submit samples of each constituent of the mix to the Engineer. The Engineer will then carry out laboratory tests in order to decide upon the proportion of each constituent of the initial design mix or mixes to be used for site trials to be carried out in accordance with Clause 1606A of this Specification.

Should the Engineer conclude from the site trials that the mix proportion or aggregate grading are to be changed, the Contractor shall submit further samples of the constituents and carry out further site trials all as directed by the Engineer.

The Engineer may instruct the alteration of the composition of the -75 micron fraction of the aggregates by the addition or substitution of mineral filler. The Engineer may also instruct the alteration of all or part of the -6.3mm fraction of the aggregates by the addition or substitution of natural sand.

The Contractor shall make the necessary adjustments to his plant to enable the revised mix to be produced.

Following laboratory and site trials the Engineer will determine the proportions of the working mix and the Contractor shall maintain this composition within the tolerances given in Clause 1614A.

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advise the Engineer accordingly. The procedure set out above shall be followed in establishing the new mix design.

1606A SITE TRIALS

Full scale laying and compaction site trials shall be carried out by the Contractor on all asphalt pavement materials proposed for the Works using the construction plant and methods proposed by the Contractor for constructing the Works. The trials shall be carried out with the agreement, and in the presence of the Engineer, at a location approved by the Engineer.

The trials shall be carried out to: -

- a) Test materials, designed in the laboratory, so that a workable mix that satisfies the specification requirements can be selected.
- b) To enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Each trial area shall be at least 100 metres long and to the full construction width and depth for the material. It may form part of the Works provided it complies with this Specification. Any areas that do not comply with this Specification shall be removed.

The Contractor shall allow in his programme for conducting site trials and for carrying out the appropriate tests on them. The trial on any pavement layer shall be undertaken at least 21 days ahead of the Contractor proposing to commence full-scale work on that layer.

The Contractor shall compact each section of trial over the range of compactive effort the Contractor is proposing and the following data shall be recorded for each level of compactive effort at each site trial: -

- i. The composition and grading of the material including the bitumen content and type and grade of bitumen used.
- ii. The moisture content of aggregate in the asphalt plant hot bins.
- iii. The temperature of the bitumen and aggregate immediately prior to entering the mixer, the temperature of the mix on discharge from the mixer and the temperature of the mix on commencement of laying, on commencement of compaction and on completion of compaction. The temperature of the mixture is to be measured in accordance with BS 598, Part 3, Appendix A.

- iv. The type, size, mass, width of roll, number of wheels, wheel load, tyre pressures, frequency of vibration and the number of passes of the compaction equipment, as appropriate for the type of roller.
- v. The target voids and other target properties of the mix together with the results of the laboratory tests on the mix.
- vi. The density and voids achieved.
- vii. The compacted thickness of the layer.
- viii. Any other relevant information as directed by the Engineer.

At least eight sets of tests shall be made by the Contractor and the Engineer on each 100 metres of trial for each level of compactive effort and provided all eight sets of results over the range of compactive effort proposed by the Contractor meet the specified requirements for the material then the site trial shall be deemed successful. The above data recorded in the trial shall become the agreed basis on which the particular material shall be provided and processed to achieve the specified requirements.

1607A MIXING OF AGGREGATES AND BITUMEN

The bitumen shall be heated so that it can be distributed uniformly and care shall be taken not to overheat it. The temperature shall never exceed 170⁰ C for 80/100- penetration grade bitumen.

The aggregates shall be dried and heated so that they are mixed at the following temperatures: -

125-165⁰C when 80/100 bitumen is used

The dried aggregates shall be combined in the mixer in the amount of each fraction instructed by the Engineer and the bitumen shall then be introduced into the mixer in the amount specified. The materials shall then be mixed until a complete and uniform coating of the aggregate is obtained.

The mixing time shall be the shortest required to obtain a uniform mix and thorough coating. The wet mixing time shall be determined by the Contractor and agreed by the Engineer for each plant and for each type of aggregate used. It shall normally not exceed 60 seconds.

1608A TRANSPORTING THE MIXTURE

The bituminous mix shall be kept free of contamination and segregation during transportation. Each load shall be covered with canvas or similar covering to protect it from the weather and dust.

1609A LAYING THE MIXTURE

Immediately after the surface has been prepared and approved, the mixture shall be spread to line and level by the laying plant without segregation and dragging.

The mixture shall be placed in widths of one traffic lane at a time, unless otherwise agreed by the Engineer. The compacted thickness of any layer shall be at least 2.5 times the maximum size of the aggregate for wearing course and at least 2 times for binder course. The minimum thickness shall be 25mm.

Only on areas where irregularities or unavoidable obstacles make the use of mechanical laying impracticable, may the mixture be spread and compacted by hand.

1610A COMPACTION

Immediately after the bituminous mixture has been spread, it shall be thoroughly and uniformly compacted by rolling.

The layer shall be rolled when the mixture is in such a condition that rolling does not cause undue displacement or shoving.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. The sequence of rolling operations shall be as agreed with the Engineer and proved during site trials.

Initial rolling with steel tandem or three-wheeled roller shall follow the laying plant as closely as possible. The rollers shall be operated with the drive roll nearest the laying plant, at a slow and uniform speed (not exceeding 5 Km/Hr).

Rolling shall normally commence from the outer edge and proceed longitudinally parallel to the centreline, each trip overlapping one half of the roller width. On super elevated curves, rolling shall begin at the low side and progress to the high side. Where laying is carried out in lanes care must be taken to prevent water entrapment.

Intermediate rolling with a pneumatic-tyred or vibratory roller shall follow immediately. Final rolling with a steel-wheeled roller shall be used to eliminate marks from previous rolling.

To prevent adhesion of the mixture to the rollers, the wheels shall be kept lightly moistened with water.

In areas too small for the roller, a vibrating plate compactor or a hand tamper shall be used to achieve the specified compaction.

1611A FINISHING, JOINTS AND EDGES

Any mixture that becomes loose and broken, mixed with dirt or foreign matter or is in any way defective, shall be removed and replaced with fresh hot mixture, which shall be compacted to conform to the surrounding area.

Spreading of the mixture shall be as continuous as possible. Transverse joints shall be formed by cutting neatly in a straight line across the previous run to expose the full depth of the course. The vertical face so formed shall be painted lightly with hot 80/100 penetration grade bitumen just before the additional mixture is placed against it.

Longitudinal joints shall be rolled directly behind the paving operation. The first lane shall be placed true to line and level and have an approximately vertical face. The mixture placed in the abutting lane shall then be tightly crowded against the face of the previously placed lane. The paver shall be positioned to spread material overlapping the joint face by 20-30mm. Before rolling, the excess mixture shall be raked off and discarded.

When the abutting lane is not placed in the same day, or the joint is destroyed by traffic, the edge of the lane shall be cut back as necessary, trimmed to line and painted lightly with hot 80/100 penetration grade bitumen just before the abutting lane is placed.

Any fresh mixture spread accidentally on the existing work at a joint shall be carefully removed by brooming it back on to uncompacted work, so as to avoid formation of irregularities at the joint. The finish at joints shall comply with the surface requirements and shall present the same uniformity of finish, texture and density as other sections of the work.

The edges of the course shall be rolled concurrently with or immediately after the longitudinal joint. In rolling the edges, roller wheels shall extend 50 to 100mm beyond the edge.

1612A SAMPLING AND TESTING OF BITUMINOUS MIXTURES

The sampling of bituminous mixtures shall be carried out in accordance with AASHTO T168 (ASTM Designation D979).

1613A QUALITY CONTROL TESTING

During mixing and laying of bituminous mixtures, control tests on the constituents and on the mixed material shall be carried out in accordance with Clause 1612A and Section 2 of this Specification.

If the results of any tests show that any of the constituent materials fail to comply with this Specification, the Contractor shall carry out whatever changes may be necessary to the materials or the source of supply to ensure compliance.

If the results of more than one test in ten on the mixed material show that the material fails to comply with this Specification, laying shall forthwith cease until the reason for the failure has been found and corrected. The Contractor shall remove any faulty material laid and replace it with material complying with this Specification all at his own expense.

1614A TOLERANCES

Surfacing courses and base shall be constructed within the geometric tolerances specified in Section 3 of this Specification.

The Contractor shall maintain the composition of the mixture as determined from the laboratory and site trials within the following tolerances, per single test: -

Bitumen Content	0.3% (by total weight of total mix)
Passing 10mm sieve and larger sieves	6% (by total weight of dry aggregate including mineral filler)
Passing sieves between aggregate 10mm and 1.0mm sieves	4% (by total weight of dry including mineral filler)
Passing sieves between aggregate 1.0mm and 0.075mm sieve	3% (by total weight of dry including mineral filler)
Passing 0.075mm sieve	2% (by total weight of dry aggregate including mineral filler)

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The final average overall width of the upper surface of a bituminous mix layer measured at six equidistant points over a length of 100m shall be at least equal to the width specified. At no point shall the distance between the centreline of the road and the edge of the upper surface of a bituminous mix layer be narrower than that specified by more than 13mm.

1615A MEASUREMENT AND PAYMENT

No separate measurement and payment shall be made for complying with the requirements of Clauses 1601A to 1614A inclusive and the Contractor shall be deemed to have allowed in his rates in Parts B and C of Section 16 of this Specification for the costs of complying with the requirements of Part A of Section 16 of this Specification.

PART B - ASPHALT CONCRETE FOR SURFACING

1601B DEFINITION

Asphalt concrete means a thoroughly controlled, hot-mixed, hot-laid, plant mixture of well-graded dried aggregate and penetration grade bitumen, which, when compacted forms a dense material.

A distinction is drawn between asphalt concrete Type I (High Stability) and asphalt concrete Type II (Flexible). The asphalt concrete type to be used will be Type I.

1602B MATERIALS FOR ASPHALT CONCRETE TYPE 1

a) Type of bituminous material

The type of material to be used on severe sites will be of the continuously graded type similar to Asphaltic Concrete or Close Graded Macadam. It is essential that these materials are sealed with a single or double surface dressing or a Cape seal.

b) Penetration Grade Bitumen

Bitumen shall be 80/100 penetration grade.

c) Aggregate

Coarse aggregate (retained on a 6.3mm sieve) shall consist of crushed stone free from clay, silt, organic matter and other deleterious substances. The aggregate class will be specified in the Special Specification and it shall comply with the requirements given in Table 16B-1(b). The grading for 0/20 mm for carriageway and 0/14mm for shoulders for binder course is as specified in **Table 16.1**.

Table 16.1: Grading Requirements for AC

Sieve size	0/20	0/14
28	100	-
20	90-100	100
14	75-95	90-100
10	60-82	70-90
6.3	47-68	52-75
4	37-57	40-60
2	25-43	30-45
1	18-32	20-35
0.425	11-22	12-24
0.300	9-17	10-20
0.150	5-12	6-14
0.075	3-7	4-8

Table 16.2: Requirements for Coarse Aggregate

Coarse Aggregate (Retained on a 6.3mm Sieve)	
Test	Maximum Value
LAA	30
ACV	25
SSS	12
FI	25

Fine aggregate (passing a 6.3mm sieve) shall be free from clay, silt, organic and other deleterious matter and shall be non-plastic. Unless otherwise specified in the Special

Specification it shall consist of entirely crushed rock produced from stone having a Los Angeles Abrasion of not more than 40. The Sand Equivalent of the fine aggregate shall not be less than 40 and the SSS not more than 12.

d) Mineral Filler

Mineral Filler shall consist of ordinary Portland Cement 42.5 Grade.

1603B GRADING REQUIREMENTS

The grading of the mixture of coarse and fine aggregate shall be within and approximately parallel to the grading envelopes given in **Table 16.2**, for 0/14mm as specified for binder course, as described below.

To arrive at a suitable design it is necessary to investigate a number of gradings so that a workable mix, which also retains a minimum of 3 % voids at refusal density, is identified.

The largest particle size used should not be more than 25mm so that the requirements of the Marshall test method can be complied with.

Although the complete range of nominal maximum particle sizes is shown in the Tables, the total thickness of material laid should not be more than 75mm.

1604B REQUIREMENTS FOR ASPHALT CONCRETE TYPE 1

The mixture shall comply with the requirements given in **Table 16.2** as specified in the Specification. In addition, minimum Marshall Stability for 2 x 75 blows shall be 9 kN and maximum 18 kN and at compaction to refusal shall have 3% VIM.

The proportion, by weight of total mixture, of bitumen shall be 5.0 – 6.5 % for 0/14 mm and 4.5 – 6.5 % for 0/20mm. This shall be termed the nominal binder content. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials.

In order to determine the suitability of a coarse aggregate source a Marshall test programme shall be carried out. It will be advantageous to use a crushed rock which is known from past experience to give good results in this test procedure. A grading conforming to the Type I Binder Course detailed in Table 16B-1(a) 0/20 of this Specification should be tested (but with 100% passing the 25mm sieve) and it shall meet the requirements of Table 16B-2 of this Specification.

Having established the suitability of the aggregate source several gradings shall be tested in the laboratory, including that used for the Marshall test, to establish relationships between bitumen content and VIM at refusal density. For each mix, samples will be made up to a range of bitumen contents and compacted to refusal using a gyratory compactor and a vibratory hammer in accordance with the procedure described in BS 598 (Part 104 : 1989), with one revision.

It should first be confirmed that compaction on one face of the sample gives the same refusal density as when the same compaction cycle is applied to both faces of the same sample. The procedure which gives the highest density, must be used.

From the bitumen content-VIM relationship it will be possible to identify a bitumen content which corresponds to a VIM of 3 - 7%. If it is considered that the workability of the mix may be difficult then compaction trials should be undertaken. It is advisable to establish two or more gradings for compaction trials.

The mixes identified for compaction trials should be manufactured to the laboratory design bitumen content and to two other bitumen contents of +0.5% and +1% additional bitumen. Cores will be cut to determine the density of the compacted material, having completed this the core will then be reheated to 145+/-5 appropriate mould and compacted to refusal in the vibrating hammer test. To be acceptable the cores cut from the compaction trial must have a density equivalent to at least 95% of refusal density.

1605B MIXING AND LAYING HEAVY DUTY ASPHALT

The temperature of the bitumen and aggregates when mixed shall be 110+/-3 above the softening point (R&B) of the bitumen.

Compaction should commence as soon as the mix can support the roller without undue displacement of material and completed before the temperature of the mix falls below 90°C.

The minimum thickness of individual layers should be as follows:-

- | | | |
|----|--------------------|------|
| a) | For the 37.5mm mix | 65mm |
| b) | For the 25.0mm mix | 60mm |
| c) | For the 19.0mm mix | 50mm |
| d) | For the 12.5mm mix | 40mm |

1606B COMPACTION

Rolling shall be continued until the voids measured in the completed layer are in accordance with the requirement for a minimum density of 98% of Marshall optimum, or, a minimum mean value of 95% of refusal density (no value less than 93%) as appropriate.

1607B MEASUREMENT AND PAYMENT

- | | | | |
|----|------|---|---|
| a) | Item | : | Asphalt Concrete |
| | Unit | : | m ³ of Asphalt Concrete Used |

Asphalt concrete shall be measured by the cubic metre compacted on the road calculated as the product of the length instructed to be laid and the compacted cross-sectional area shown on the Drawings or instructed by the Engineer.

The rate for asphalt concrete shall include for the cost of providing, transporting, laying and compacting the mix with the nominal binder content and complying with the requirements of Parts A and B of Section 16 of this Specification.

PART C - ASPHALT CONCRETE FOR POTHOLE PATCHING

Surface Preparation for Pothole Patching:

a. Scope of Work:

Pothole patching work shall consist of repairing potholes on asphalt concrete pavements by cutting, cleaning, and filling the pothole with hot mix asphalt concrete in accordance with these specifications.

b. Materials:

The asphalt concrete mix shall comply with the requirements of this, Section 16. The aggregate gradation and bitumen content shall be as specified in the approved mix design.

c. Execution:

Potholes on the asphalt concrete pavement shall be cut to a depth of 50 mm, ensuring vertical edges. The area shall be cleaned thoroughly. A prime coat shall be applied to the base of the pothole to seal any voids and promote adhesion of the AC mix, A tack coat shall then be applied to the prepared surface. After, place the asphalt concrete mix in layers and compact each layer to the specified density.

MEASUREMENT AND PAYMENT

- | | | | |
|----|------|---|---------------------------------------|
| a) | Item | : | Asphalt Concrete for Pothole Patching |
|----|------|---|---------------------------------------|

Unit : m³ of Asphalt Concrete Used

Asphalt concrete shall be measured by the cubic metre compacted on the road calculated as the product of the length instructed to be laid on the compacted cross-sectional area shown on the Drawings or instructed by the Engineer.

The rate for asphalt concrete shall include for the cost of providing, transporting, laying and compacting the mix with the nominal binder content and complying with the requirements of Parts A and B of Section 16 of this Specification.

The work of pothole cutting and cleaning shall be measured by the cubic meter of the calculated volume of potholes calculated as the product of the area of pothole times the depth times the number of potholes.

SECTION 17: CONCRETE WORKS (MAJOR)

1703 MATERIALS FOR CONCRETE

All materials shall comply with the requirements of section 1703 of the standard specifications.

Cement for all concrete works shall be Ordinary Portland Cement complying with KS1725: 2001 CEM 1 42.5N

This work shall consist of placing selected approved rock fill material of 250mm minimum diameter on the foundation put after excavation to receive levelling concrete in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the Drawings as directed by the Engineer.

a) Materials

Selected rock: The selected rock builders to be placed for this work shall be hard, sound, durable quarry stones as approved by the Engineer. Samples of the stone to be used shall be submitted to and approved by the Engineer before any stone is placed.

The maximum size of the stone boulders shall be 300mm.

b) Construction Method

After completion of the structural excavation the surface of the loose soil shall be levelled and compacted. Then the stone of the above sizes shall be placed in one layer of 250mm over the compacted bed where the bottom slab will rest. Coarse sand shall be spread to fill up the voids in the stone boulders, and compaction with vibratory compactors should be performed to make this layer dense whereon a concrete of levelling course shall be placed.

c) Measurement and payment

Measurement for the bedding materials shall be made in cubic metres for the completed and accepted work, measured from the dimension shown on the Drawings, unless otherwise directed by the Engineer.

Payment for the bedding Materials for Levelling Concrete Works shall be full compensation for furnishing and placing all materials, all labour equipment, tools and all other items necessary for proper completion of the work in accordance with the Drawings and specifications and as directed by the Engineer.

1703(A) LEVELLING CONCRETE (CLASS 15/20) FOR BOTTOM SLAB INCLUSIVE OF COST OF FORM WORKS

This work shall consist of placing and levelling lean concrete class 15/20 over the prepared bed of stone boulders in the foundation for bottom slab and wing walls in accordance with these specifications and which conformity with the lines, grades, thickness and typical cross-sections shown on the drawings unless otherwise directed by the Engineer.

a) Materials for Levelling Concrete

Requirement for the concrete class 15/20 is specified as follows:

Design compressive strength (28) days	15N/mm ²
Maximum size of coarse aggregate	20mm
Maximum cement content	300kg/m ³
Maximum water/cement ratio of 50% with slump of 80mm	

b) Construction Method

The bed of stone boulders upon which the levelling concrete will be placed shall be smooth, compacted and true to the grades and cross-section shall be set to the required lines and grades.

c) Measurement and Payment

Measurement for levelling concrete (class 15/20) shall be made in cubic metres completed and accepted levelling concrete work measured in place which is done in accordance with the Drawings and the Specifications.

Payment for this work shall be the full compensation for furnishing and placing all materials, labour, equipment and tools, and other incidentals to Specifications and as directed by the Engineer.

1703 (C) FORMWORK FOR CULVERT WALLS

This work shall consist of all temporary moulds for forming the concrete for culvert walls and slabs together with all temporary construction required for their support. Unless otherwise directed by the Engineer all formworks shall be removed on completion of the walls and slabs.

a) Materials

Forms shall be made of wood or metal and shall conform to the shape, lines and dimensions shown on the Drawings.

All timber shall be free from holes, loose material, knots, cracks, splits and warps or other defects affecting the strength or appearance of the finished structure.

Release Agents – Release agents shall be either neat oils containing a surface activating agent, cream emulsions, or chemical agents to be approved by the Engineer.

b) Construction Method

I. Formworks

Formworks shall be designed to carry the maximum loads that may be imposed, and so be rigidly constructed as to prevent deformation due to load, drying and wetting, vibration and other causes. After forms have been set in correct location, they shall be inspected and approved by the Engineer before the concrete is placed.

If requested, the contractor shall submit to the Engineer working drawings of the forms and also, if requested, calculations to certify the rigidity of the forms.

1703(D) CONCRETE WORKS (CLASS 20/20) OF CULVERT WALLS AND SLABS

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of culvert walls and slabs, in accordance with these Specifications and in conformity with the requirements shown on the Drawings. Concrete class 20/20 shall be used for Culvert walls and slabs.

I. Cement:

Cement shall be of Portland type and shall conform to the requirements of BS 12 or equivalent.

The contractor shall select only one type or brand of cement or others. Changing of type or brand of cement will not be permitted without a new mix design approved by the Engineer. All cement is subject to the Engineer's approval, however, approval of cement by the Engineer shall not relieve the Contractor of the responsibility to furnish concrete of the specified compressive strength.

Conveyance of cement by jute bags shall not be permitted. Storage in the Contractor's silo or storehouse shall not exceed more than two (2) months, and age of cement after manufacture at mill shall not exceed more than four months. The Contractor shall submit to the Engineer for his approval the result of quality certificate prepared by the

manufacturer.

Whenever it is found out that cement have been stored too long, moist, or caked, the cement shall be rejected and removed from the project.

II. Aggregates

Fine and coarse aggregates must be clean, hard, strong and durable, and free from absorbed chemicals, clay coating, or materials in amounts that could affect hydration, bonding, strength and durability of concrete.

Grading of aggregates shall conform to the following requirements:

(i) Grading of Fine Aggregates

Sieve Size	Percentage by Weight Passing
10 mm	100
5 mm	89-100
2.5 mm	60-100
1.2 mm	30-100
0.6 mm	15- 54
0.3 mm	5- 40
0.15 mm	0-15

(ii) Grading of Coarse Aggregates

Size of Coarse Aggregate	Amounts finer than each standard sieve percentage by weight							
	40 2.5	30	25	20	15	10	5	2.5
	100	-	-	90-100	-	30-69	0-10	

Other requirements for aggregates are as follows:

(iii) Fine Aggregates

Fitness Modulus, AASHTO M-6	:	2.3 – 3.1
Sodium Sulphate Soundness, AASHTO T104 loss	:	Max 10%
Content of Friable Particles AASHTO 112	:	Max 1% by weight
Sand Equivalent, AASHTO T176	:	Min 75

(iv) Coarse Aggregate

Abrasion, AASGTO T96	:	Max 405 loss
Soft Fragment and shale, AASHTO M80	:	Max 5% by weight
Thin and elongated Pieces, AASHTO M80	:	Max 15%

(v) Water

All sources of water to be used with cement shall be approved by the Engineer. Water shall be free from injurious quantities of oil, alkali, vegetable matter and salt as determined by the Engineer.

(vi) Admixture

Only admixture, which have been tested and approved in the site laboratory through trial mixing for design proportion shall be used. Before selection of admixture, the Contractor shall submit to the Engineer the specific information or guarantees prepared by the admixture supplier. The contractor shall not exclude the admixture from concrete proportions.

a) Concrete class 20/20

Concrete class 20/20 shall be used for culvert walls and slabs. The requirements of Concrete class 20/20 are provided as follows unless otherwise the Engineer will designate any alteration.

Design compressive strength (28 days)	:	20N/mm ²
Maximum size of coarse aggregates	:	20mm
Maximum water/cement ratio of 45% with slump of 80mm		

b) Proportioning Concrete

The Contractor shall consult with the Engineer as to mix proportions at least thirty (30) days prior to beginning the concrete work. The actual mix proportions of cement, aggregates, water and admixture shall be determined by the Contractor under supervision of the Engineer in the site laboratory.

The Contractor shall prepare the design proportions which has 120% of the strength requirement specified for the designated class of concrete.

No class of concrete shall be prepared or placed until its job-mix proportions have been approved by the Engineer.

c) Concrete Work

I. Batching

Batching shall be done by weight with accuracy of:

Cement	:	½ percent
Aggregate	:	½ percent
Water and Admixture	:	1 percent.

- II. Equipment should be capable of measuring quantities within these tolerances for the smartest batch regularly used, as well as for larger batches.

The accuracy of batching equipment should be checked every month in the presence of the Engineer and adjusted when necessary.

III. Mixing and Delivery

Slump of mixed concrete shall be checked and approved at an accuracy of +25mm against designated slump in these specifications.

IV. Concrete in hot weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty-three degrees Celsius (33°C) during placement operations.

V. Concreting at night

No concrete shall be mixed, placed or finished when natural light is insufficient, unless an adequate approved artificial lighting system is operated, such night work is subject to approval by the engineer.

VI. Placing

In preparation of the placing of concrete, the interior space of forms shall be cleaned and approved by the engineer prior to placing concrete. All temporary members except tie bars to support forms shall be removed entirely from the forms and not buried in the concrete. The use of open and vertical chute shall not be permitted unless otherwise directed by the engineer.

The Contractor shall provide a sufficient number of vibrators to properly compact each batch immediately after it is placed in the forms.

Measurement and Payment:

Measurements for the Concrete Works Class 20/20 of culvert walls and slabs shall be made in cubic metres for the walls and slabs actually constructed, measured from their dimensions shown on the Drawings. Payment for the Concrete Works (Class 20/20) of culvert walls and slabs shall be the full compensation for furnishing all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidental necessary for the completion of the work in accordance with the Drawings and these Specifications and as directed by the Engineer.

1704 DESIGN OF CONCRETE MIXES

The following classes of concrete shall be designed and mix proportions approved for use as follows:

- Class 15/20 for all blinding to structures and precast pipe culvert beds and surrounds
- Class 25/20 for all culvert headwalls, wing-walls, aprons, toe-walls, and bridge members; abutments, piers and deck
- Class 30/20 for bridge superstructure beams

Specifications for construction materials and quality control shall be in accordance with the standard specifications.

1713 FINISHES ON UNFORMED SURFACES

All unformed surfaces shall be finished to class UF 3 Finish in accordance with the standard specifications

1725 SURFACE FINISHES

All surfaces shall be finished to class F3 finish in accordance with the standard specifications.

1728 REINFORCEMENT FOR CONCRETE

All reinforcement to concrete shall be hot rolled high yield deformed bars complying with BS 4449 and steelmesh fabric to BS 4483.

1741 MEASUREMENT AND PAYMENT

a) Item: Concrete

Amend clause 1741 (a) (iv) of standard specifications to read “class UF 3 finish”.

b) Item: formwork for formed surface finishes

Amend the following to Clause 1741 (e) of the Standard Specification:

Unit m² of formwork shall cover inclined formwork of all slopes and angles.

SECTION 20: ROAD FURNITURE

2001 ROAD RESERVE BOUNDARY POSTS

Road reserve boundary posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2001.

2003 EDGE MARKER POSTS

Edge marker posts shall be provided as directed by the Engineer and in compliance with standard Specification Clause 2003.

2004 PERMANENT ROAD SIGNS

Permanent Road Signs shall be provided as directed by the Engineer and in compliance with the requirements of the "Manual for Traffic Signs in Kenya" Part II and standard Specification clause 2004.

2004B EXISTING ROAD SIGNS

Where directed by the Engineer, the Contractor shall take down road signs including all posts, nuts, bolts and fittings, and remove and dispose of the concrete foundation and backfill the post holes. The signs shall be stored at the Contractor's store and they shall become the property of the Employer who shall remove them prior to the expiry of the maintenance period.

Measurement and payment for taking down road signs shall be made by the number of signs of any type and size taken down, cleaned and stored as directed.

Where a salvaged existing sign complies with the requirements of new road signs, the Engineer may instruct the Contractor to remove the sign for safe storage, and re-erect it.

Measurement and payment shall be made by the number of road signs re-erected as directed and the rate shall include for excavation, concrete foundations and backfilling around posts and removal of surplus material to spoil.

2005 ROAD MARKING

Paint for road marking shall be internally reflectorized hot applied thermoplastic material in accordance with Clause 218 d(ii) of the Standard Specification.

The rates inserted in the Bills of Quantities for road marking shall include for prior application of approved tack coat.

2006 GUARDRAILS

Contrary to the Standard Specification, guardrail posts shall be concrete 200 mm diameter set vertically at least 1.2m into the shoulder as directed by the Engineer. Spacer blocks shall also be made of concrete.

Beams for guardrails shall be "Armco Flex beam" or similar obtained from a manufacturer approved by the Engineer.

2007 KERBS

a) Vertical Joints

Vertical joints between adjacent Kerbs shall not be greater than 5 mm in width and shall be filled with a mortar consisting of 1:3 cement: sand by volume.

b) Transition between flush and raised kerbs

The transition between flush and raised kerbs (e.g at bus bays) shall be termed as ramped kerbs. The transition between flush and raised kerbs shall occur within a length of 2.0 m.

2008 KILOMETRE MARKER POSTS

Kilometre marker posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2008.

2009 RUMBLE STRIPS

Where directed by the Engineer, the Contractor shall provide, place, trim, shape and compact to line and level asphaltic concrete rumble strips on the finished shoulders. This shall be done to the satisfaction of the Engineer

2010 BOLLARDS

Where directed by the Engineer, the Contractor shall provide, and install class 20/20 200mm diameter reinforced concrete Bollards concreted 300mm into the ground.

SECTION 22: DAYWORKS

This section covers provisional items included in the Bills of Quantities to cover the payment of equipment, labour and materials for work instructed by the Engineer on a daywork basis.

22- 001 : Dayworks

Measurement and Payment

a. Equipment:

Payment for equipment shall only be made for the time each item of equipment is actually working. Idle time due to breakdown or incompleteness of the equipment shall not be paid for. The rate of equipment shall include for the cost of the following:-

- i) Transport of the equipment to the site
- ii) Operators, drivers and assistants including their overtime
- iii) Maintenance, spare parts and all costs of repairs
- iv) Depreciation insurance, overheads and profits.

b. Labour

Payment shall only be made for the time each of worker labour is actually working on the daywork instructed by the Engineer. The rate for labour shall include the cost of the following:-

- i) All salaries allowances and other payments required by the worker
- ii) Provision of small tools used on Dayworks such as picks, shovels, pangas, jembes hammers chisels and all other tools used by tradesmen.
- iii) Insurance, overheads and profit.

c. Materials

Payment shall only be made for materials instructed by the Engineer for use in dayworks. The rate for materials shall include for the cost of provision of the material, transport to site and storage handling overheads and profits.

d. Use of Dayworks

The use of Dayworks shall be only sanctioned by the Authorized Person for extra and substituted works and at the rates approved by the Ministry of Roads for the current period.

DRAWINGS

List of Drawings:

1. FIGURE C.1. – CROSS SECTION A – PAVED ROAD STANDARD CROSS SECTION
2. FIGURE C.2. – CROSS SECTION A – UNPAVED MINOR ROAD (STANDARD CROSS SECTION)
3. FIGURE C.3. – CROSS SECTION B – UNPAVED ROAD (REDUCED CROSS SECTION)
4. FIGURE C.4. – MITRE DRAINS
5. FIGURE C.5. – SCOUR CHECKS
6. FIGURE C.6. – DIMENSIONS OF SCOUR CHECKS FOR STANDARD DRAIN
7. FIGURE C.7. – MASONRY SCOUR CHECKS
8. FIGURE C.8. – CONCRETE SCOUR CHECKS
9. FIGURE C.9. – GABION PROTECTION WORKS
10. FIGURE C.10. – CULVERT ENTRY/EXIT STRUCTURE TYPES
11. FIGURE C.11. – HEADWALL TYPE 1 (HEADWALLS & WINGWALLS)
12. FIGURE C.12. – HEADWALL TYPE 2 (DROP INLET)
13. FIGURE C.13. – HEADWALL TYPE 3A (CONCRETE BLOCK HEADWALLS)
14. FIGURE C.14. – HEADWALL TYPE 3B (STONE MASONRY HEADWALLS)
15. FIGURE C.15. – HEADWALL TYPE 4 (FOR ACCESS CULVERTS)
16. FIGURE C.16. – SINGLE CELL BOX CULVERT
17. FIGURE C.17. – BEDDING AND HAUNCH PROFILES TYPES I & II
18. FIGURE C.18. – BEDDING AND HAUNCH PROFILES TYPES III & IV
19. FIGURE C.19. – MASONRY DRIFT
20. FIGURE C.20. – NORMAL CONCRETE DRIFT
21. FIGURE C.21. – VENTED CONCRETE DRIFT
22. FIGURE C.22. – TRAFFIC SIGNS
23. FIGURE C.23. – EDGE MARKER POST
24. FIGURE C.24. – PUBLICITY SIGN BOARD

FIGURE C.1. – CROSS SECTION A – PAVED ROAD

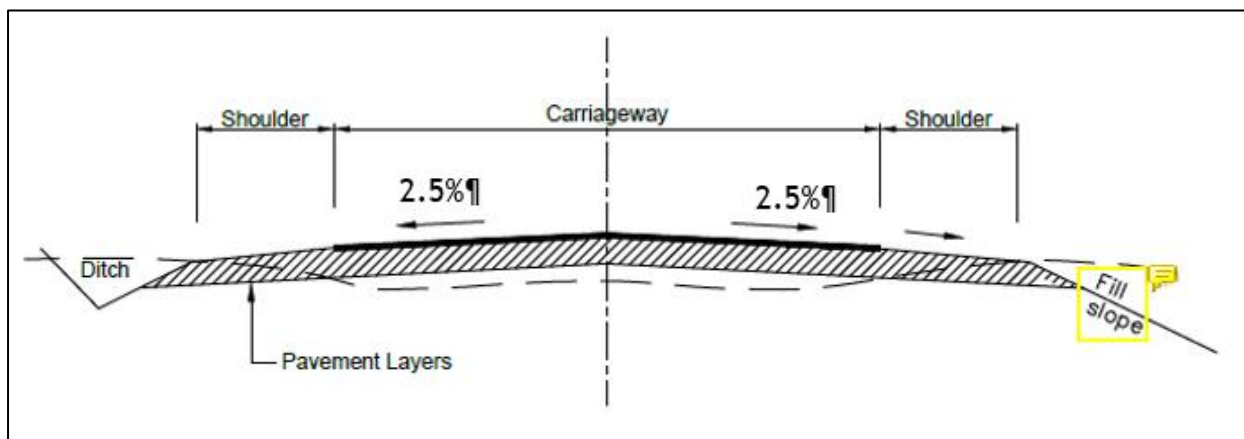
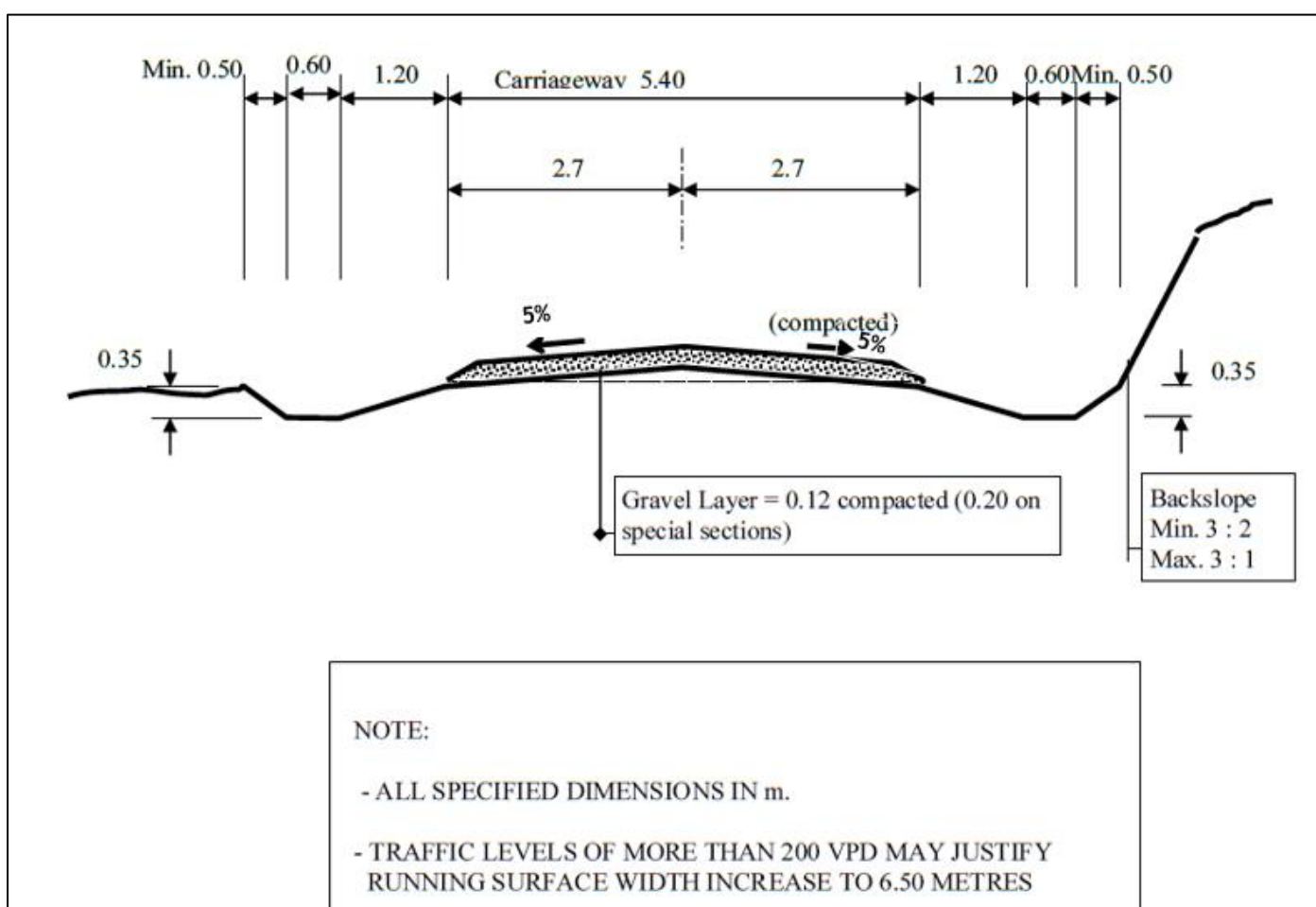


FIGURE C.2. – CROSS SECTION A – UNPAVED ROAD



Min. 0.50 0.40 1.000 Carriageway 4.50 1.00 0.40

0.305

5%

(compacted) 5%

0.30

NOTE: - ALL SPECIFIED DIMENSIONS IN m.
Gravel Layer - 0.10 compacted (0.20 on special sections)

Backslope
Min. 3 : 2
Max. 3 : 1

Cross section:

1:1 0.60m 1:1
Min.

Plan:

3.0m Min.
Side drain
Mitre drain 30-60°

Side drain
Centre line
Backslope
Mitre drain
Curve
Straight
No excavation of side drain
Additional blockage with material from mitre drain

FIGURE C.5. – SCOUR CHECKS

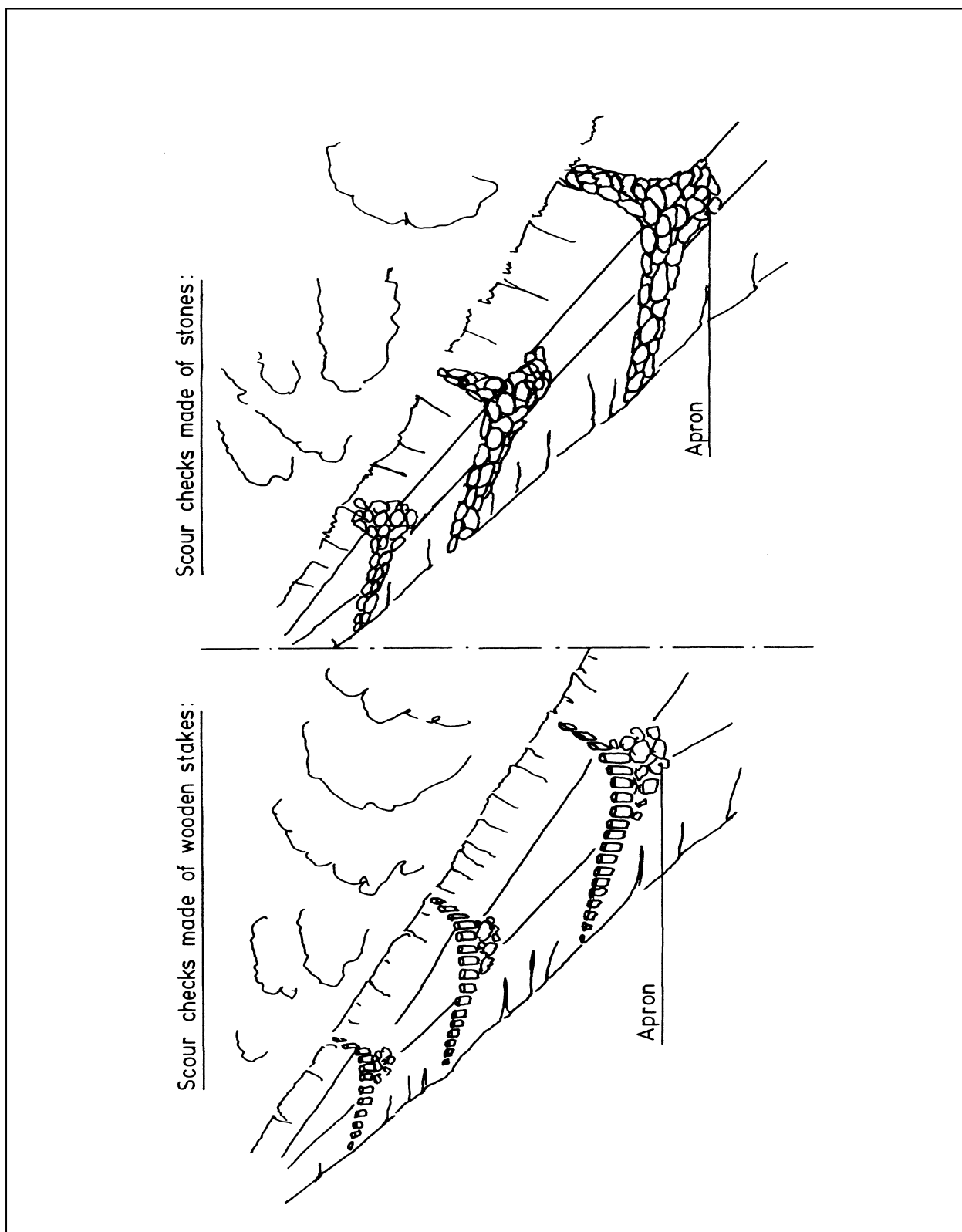


FIGURE C.6. – DIMENSIONS OF SCOUR CHECKS FOR STANDARD DRAIN

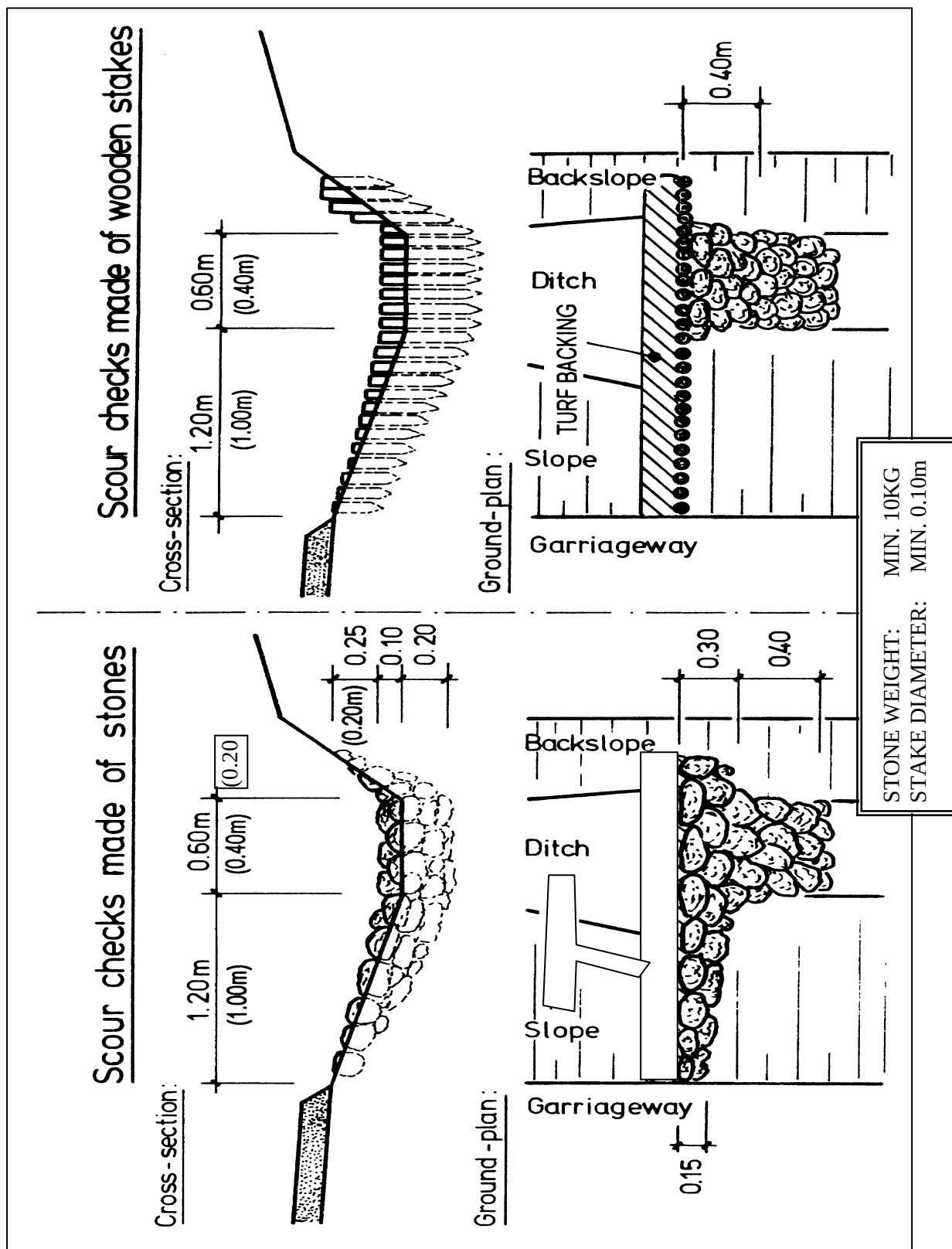
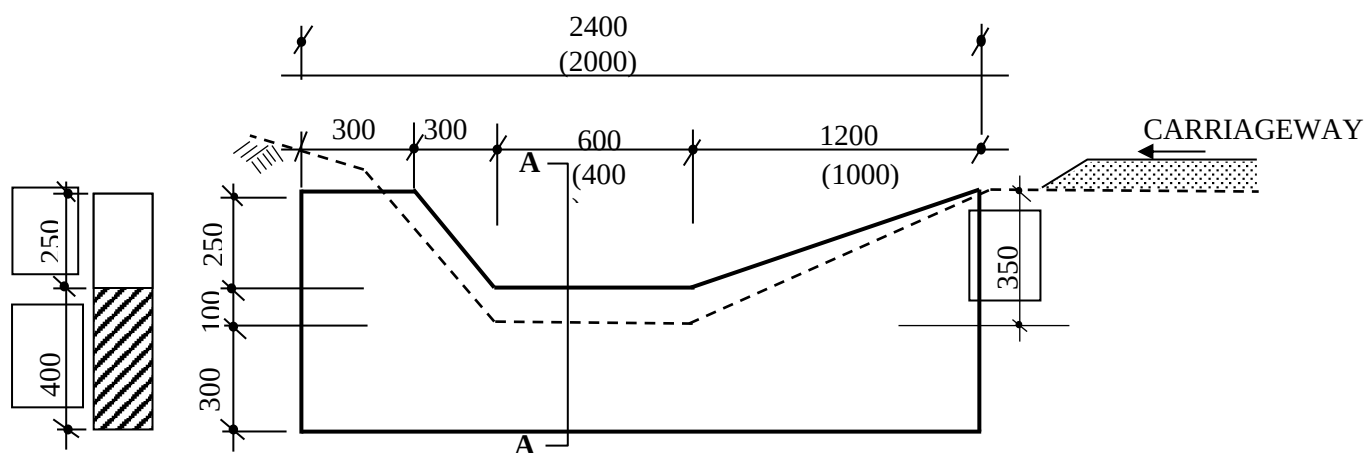
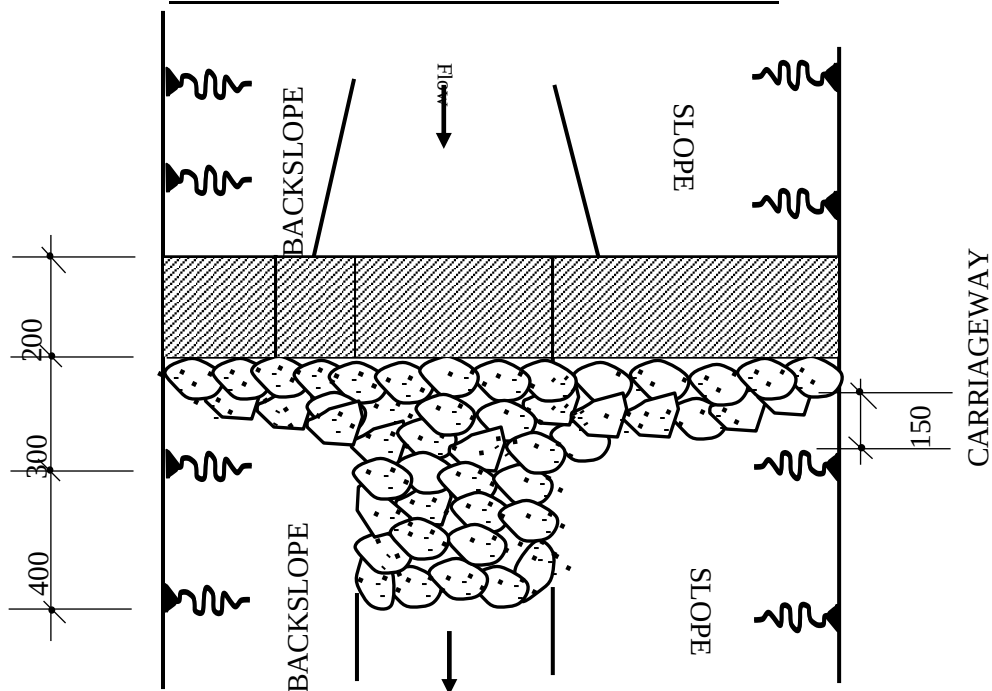


FIGURE C.7. – MASONRY SCOUR CHECKS



A - A

A SECTION OF MASONRY SCOUR CHECKS



PLAN OF DRAIN WITH EROSION CHECKS

QUANTITIES TABLE

Cross-Section	Sizes in mm			Excav. (m ³)	Stone masonry (m ³)	Apron stone pitching (m ³)
	Length	Width	Depth			
A	2400	200	550	0.22	0.25	0.18
B	2000	200	500	0.18	0.2	0.14

FIGURE C.8. – CONCRETE SCOUR CHECKS

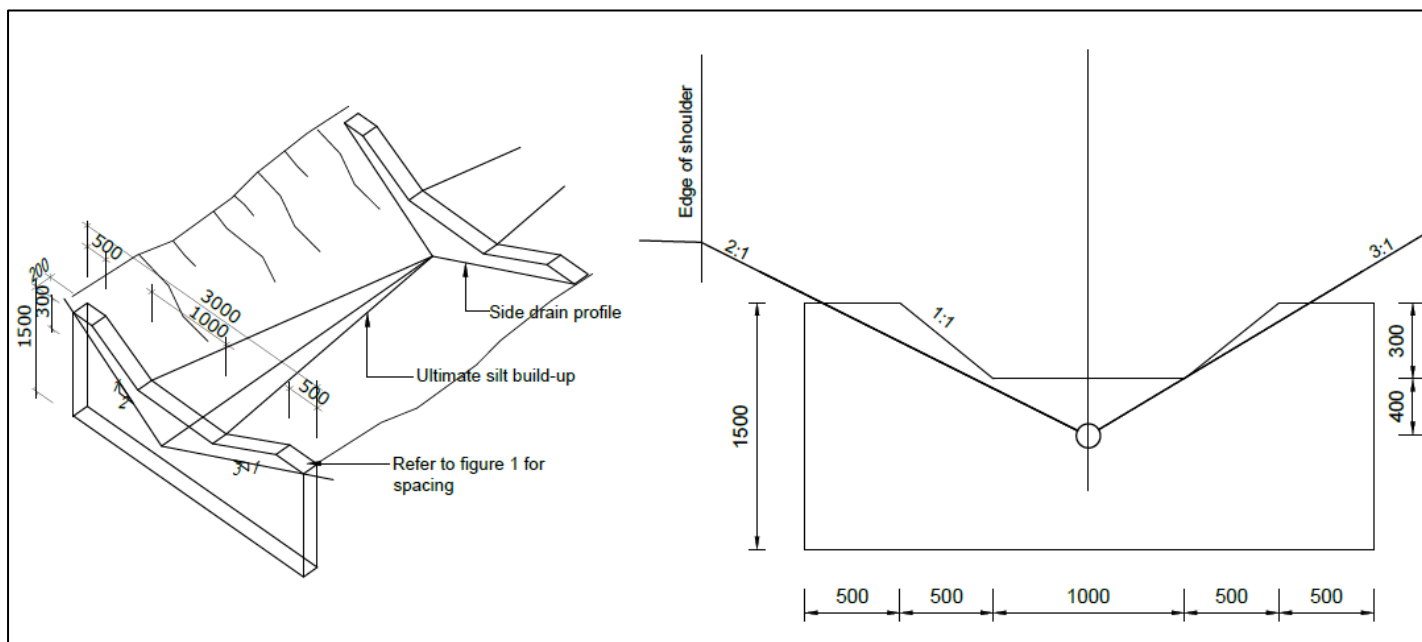


FIGURE C.9. – GABIONS

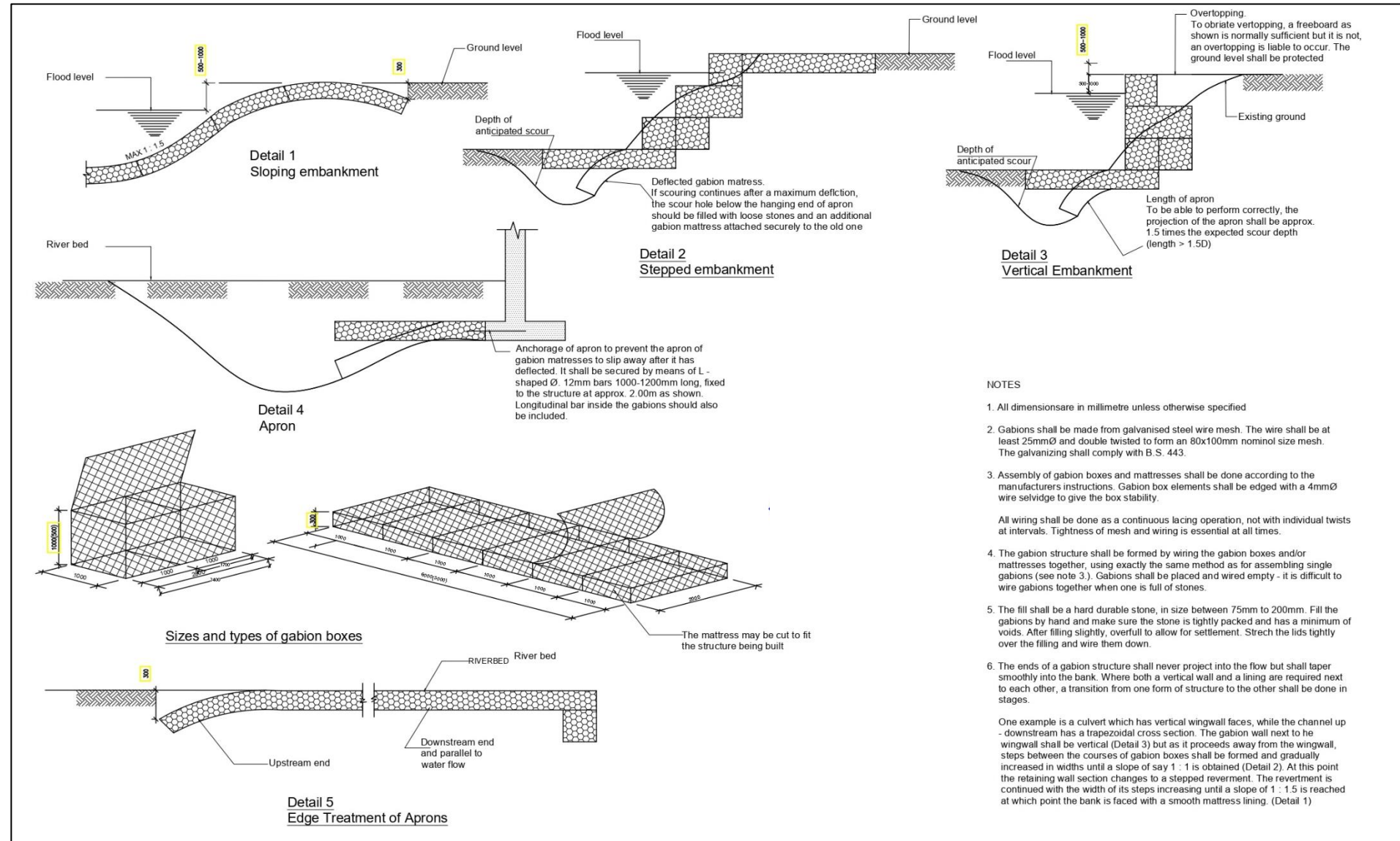
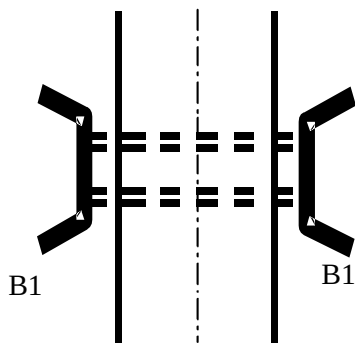
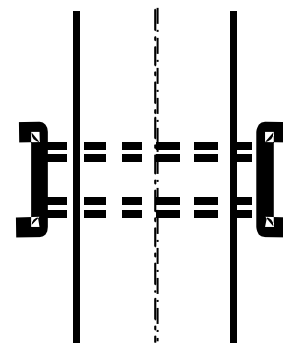


FIGURE C.10. – CULVERT ENTRY/EXIT STRUCTURE TYPES

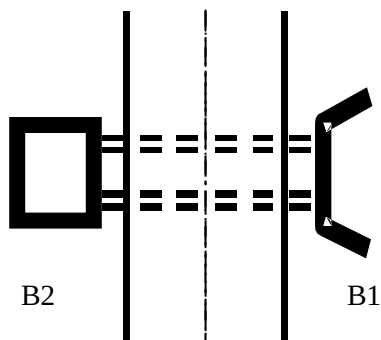
TYPE 1 (ENTRY AND EXIT)



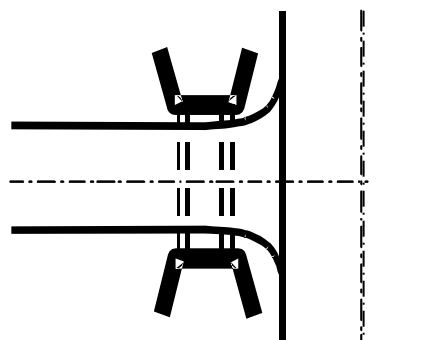
TYPE 3 (ENTRY AND EXIT)



TYPE 2 (ENTRY ONLY)



TYPE 4 (ENTRY AND EXIT ON ACCESS)



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.11. – HEADWALL TYPE 1 (HEAD WALL AND WINGWALLS)

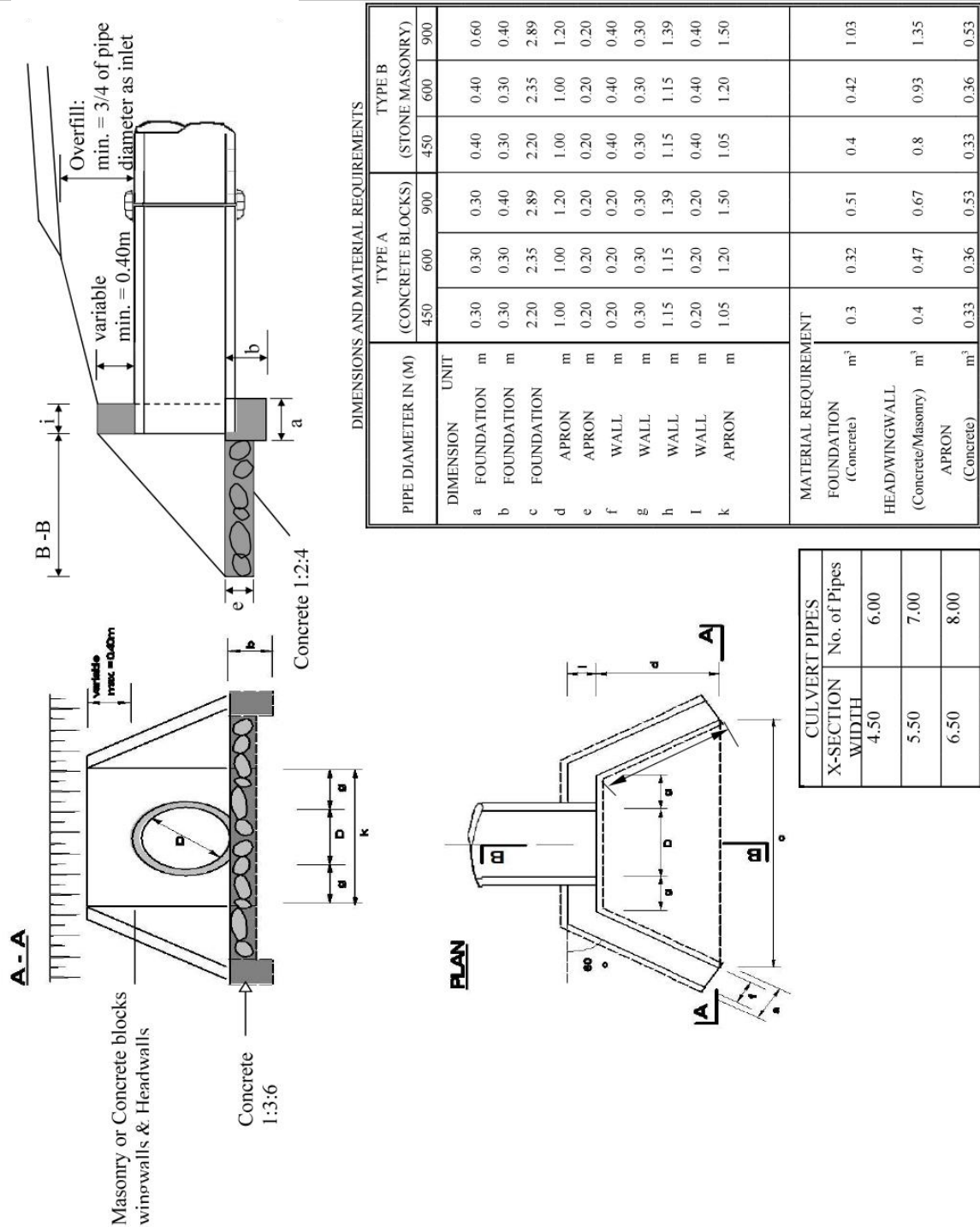
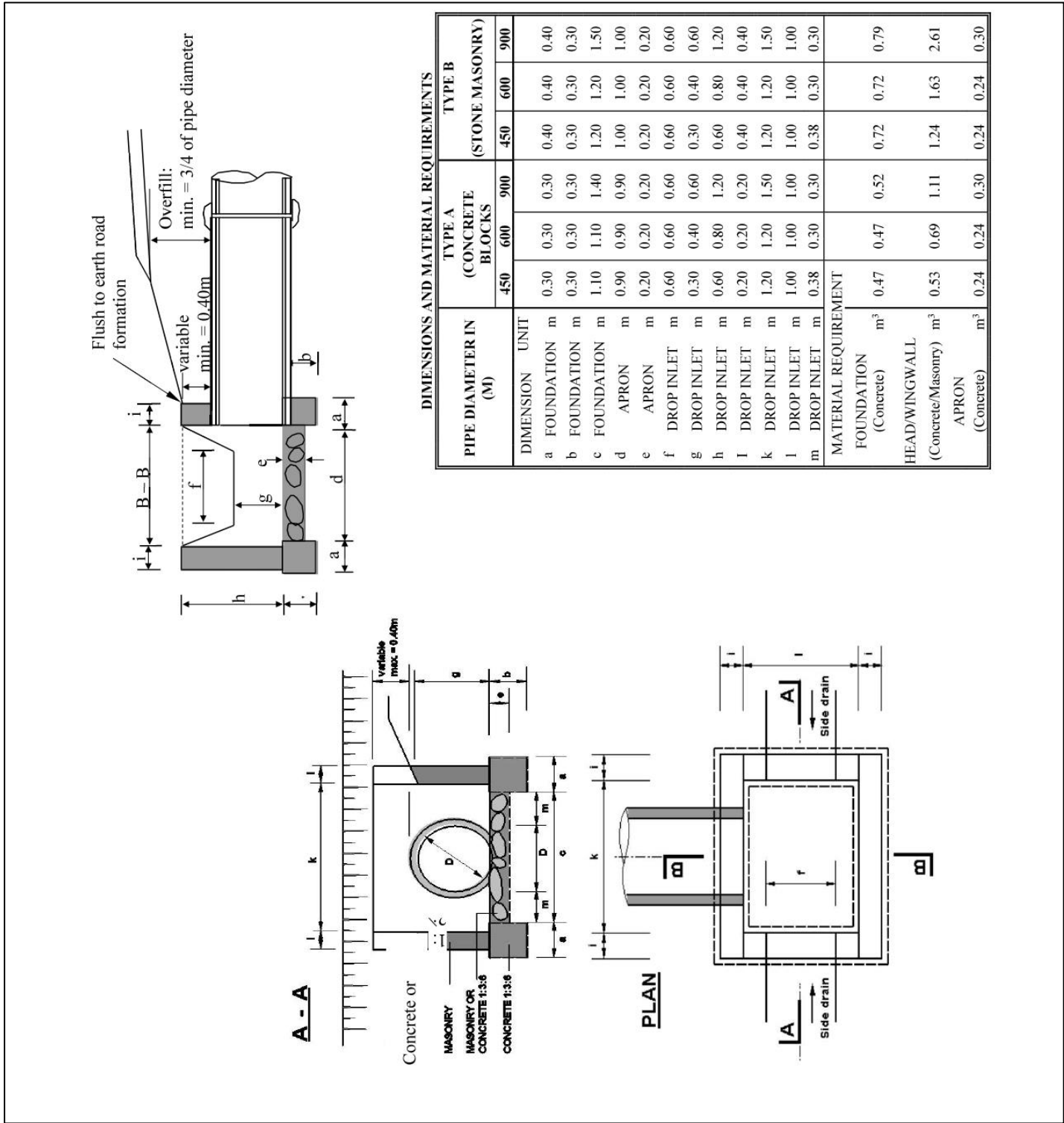


FIGURE C.12. – HEADWALL TYPE 2 (DROP INLET)



A - A

B - B

PLAN

CONCRETE 1:3:6

MASONRY OR CONCRETE 1:3:6

variable max. = 0.40m

Flush to earth road

variable

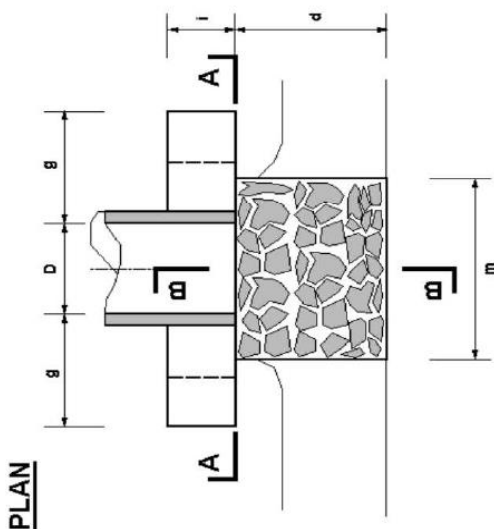
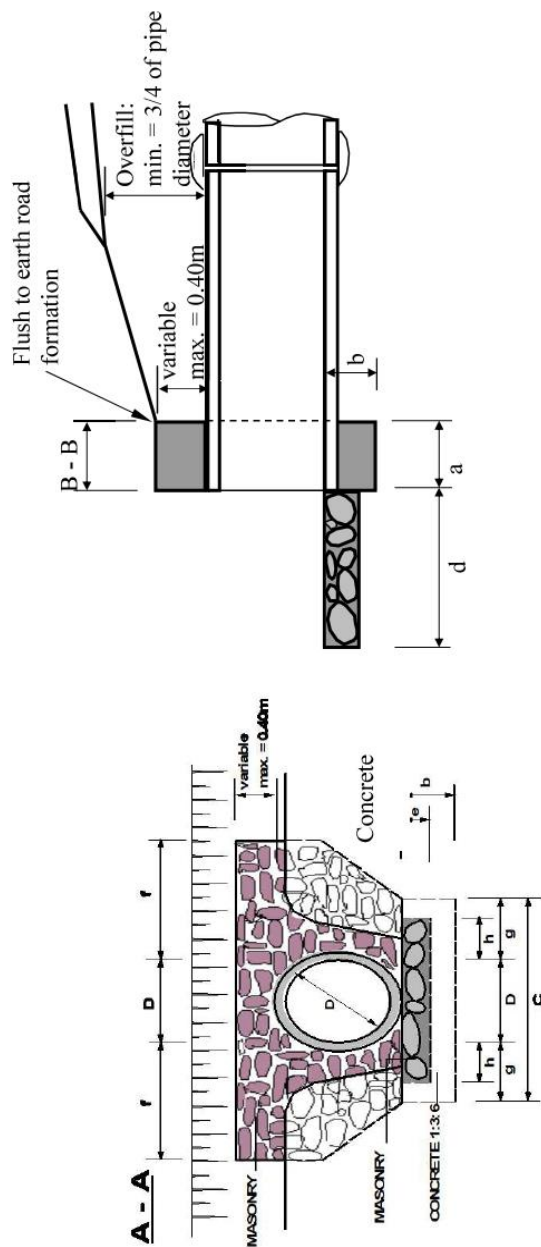
Overfill: min. = 3/4 of

Side drain Gradient max. 10%

TYPE A

PIPE DIAMETER IN	CONCRETE BLOCKS		
	450	600	
DIMENSION	UNIT		
a	FOUNDATION	m	0.50
b	FOUNDATION	m	0.30
c	FOUNDATION	m	1.55
d	APRON	m	0.60
e	APRON	m	0.20
f	HEADWALL	m	0.20
g	HEADWALL	m	0.50
h	HEADWALL	m	0.40
i	HEADWALL	m	0.20
k	HEADWALL	m	1.05
l	FOUNDATION	m	0.95
m	FOUNDATION	m	0.25
n	HEADWALL	m	1.45
o	FOUNDATION	m	0.30
MATERIAL REQUIREMENT			
FOUNDATION (Concrete)	m ³	0.23	0.19
HEAD/WINGWALL (Concrete/Masonry)	m ³	0.31	0.34
APRON (Concrete)	m ³	0.95	0.99

FIGURE C.14. – HEADWALL TYPE 3B (STONE MASONRY HEADWALLS)



PIPE DIAMETER IN (M)	TYPE B /CONC	
	450	600
DIMENSION	UNIT	
a	FOUNDATION	m
b	FOUNDATION	m
c	FOUNDATION	m
d	APRON	m
e	APRON	m
f	HEADWALL	m
g	HEADWALL	m
h	HEADWALL	m
i	HEADWALL	m
m	FOUNDATION	m
MATERIAL REQUIREMENT		
FOUNDATION		
(Concrete 1:3:6)		m ³
HEAD/WINGWALLS		
(Concrete/Masonry)		m ³
APRON		
(Concrete 1:2:4)		m ³

FIGURE C.15. – HEADWALL TYPE 4 (FOR ACCESS CULVERTS)

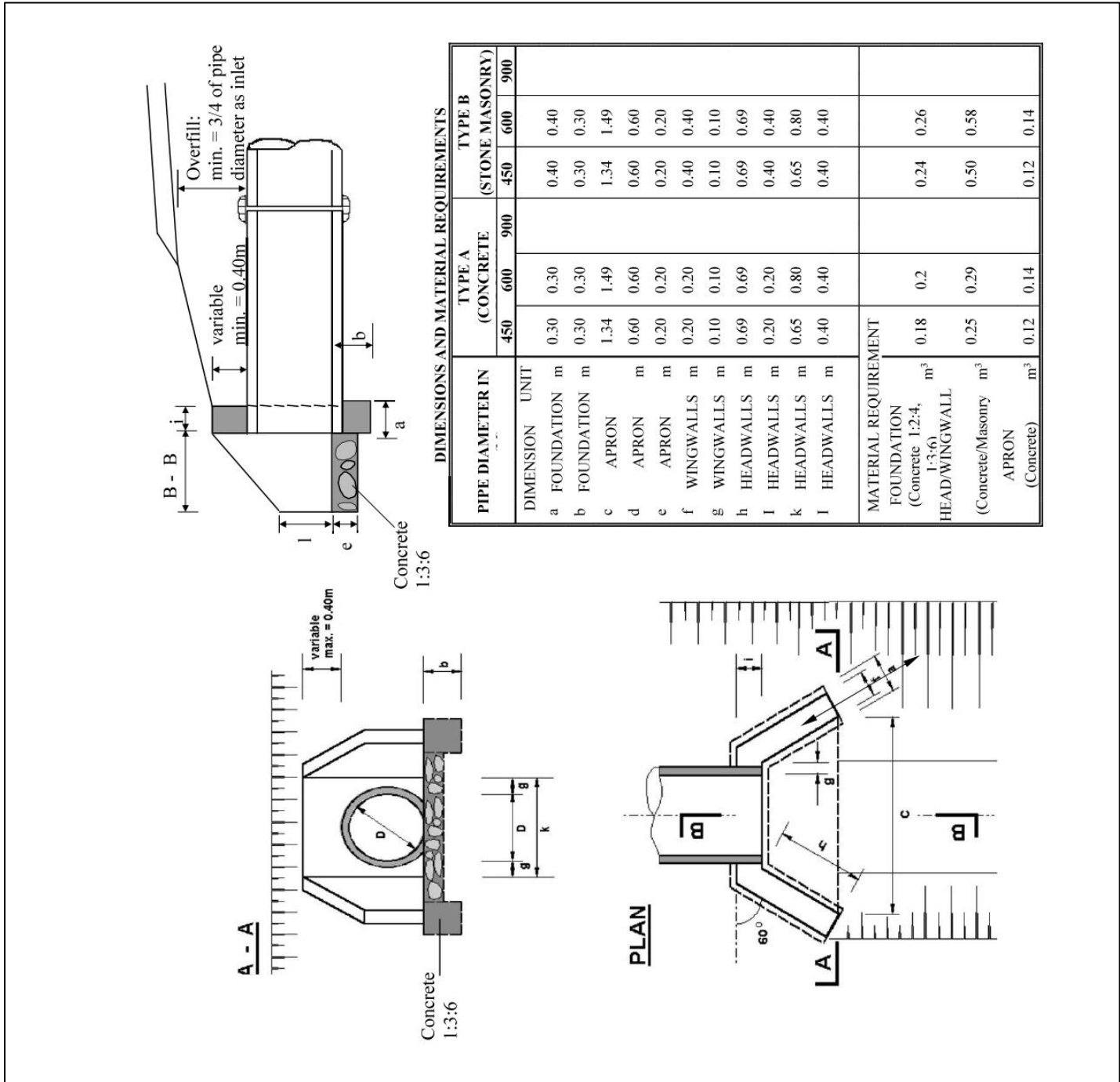
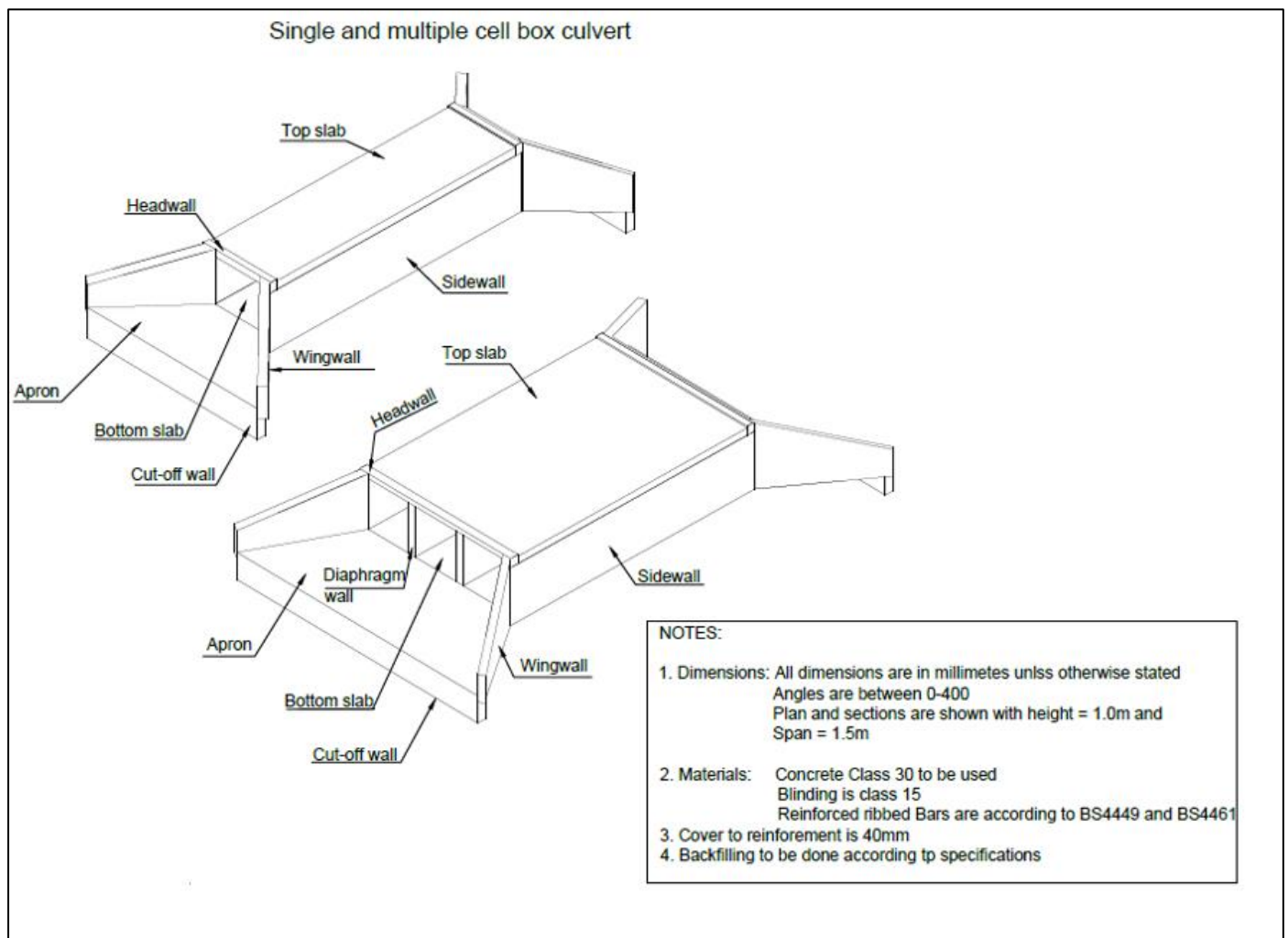
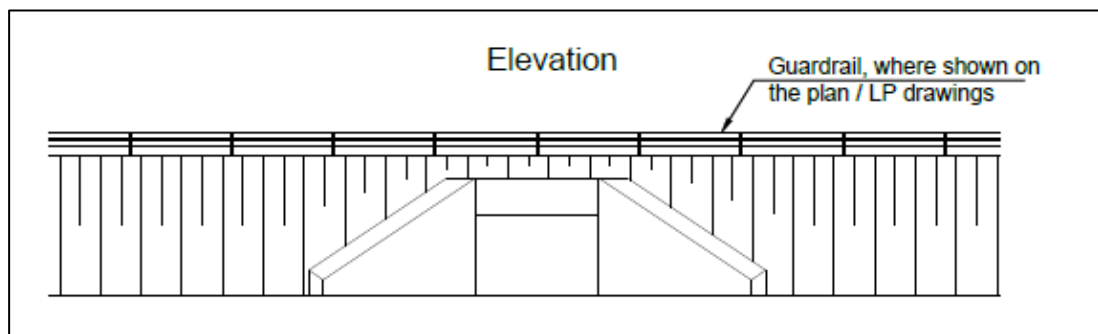
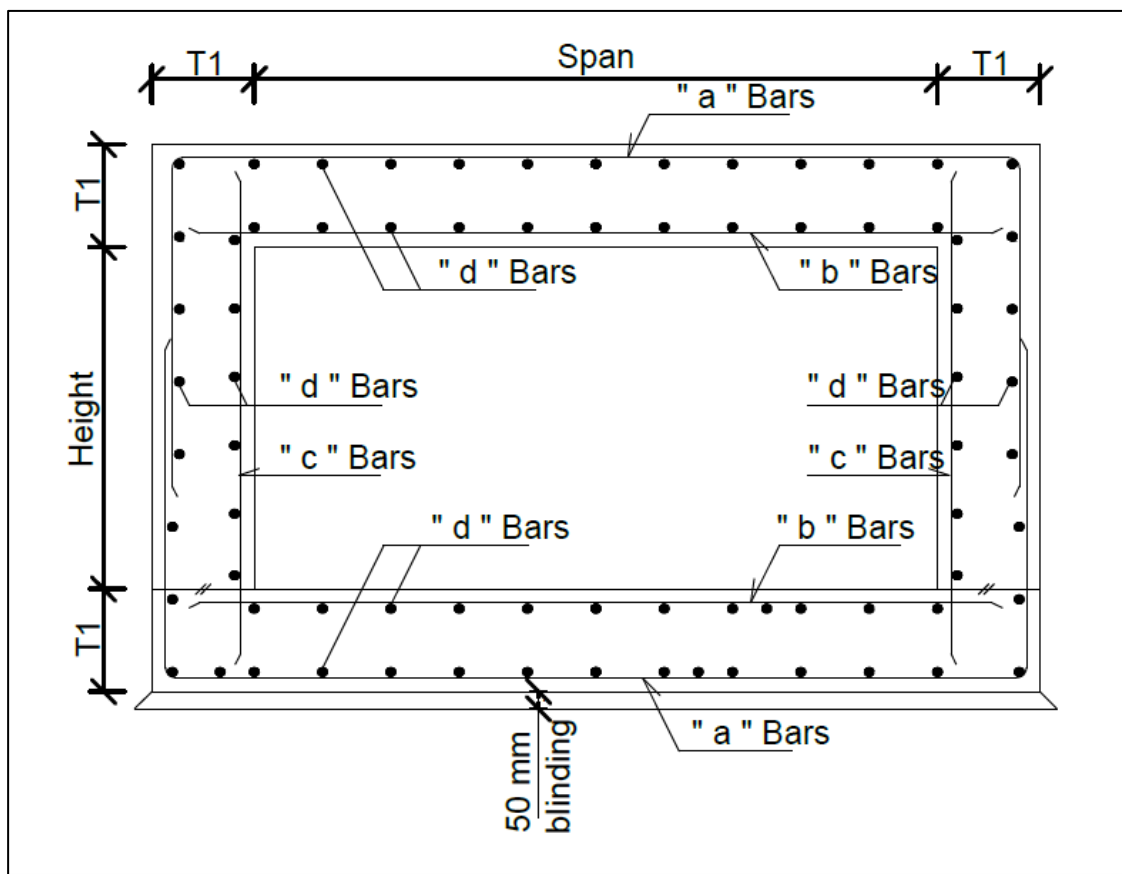
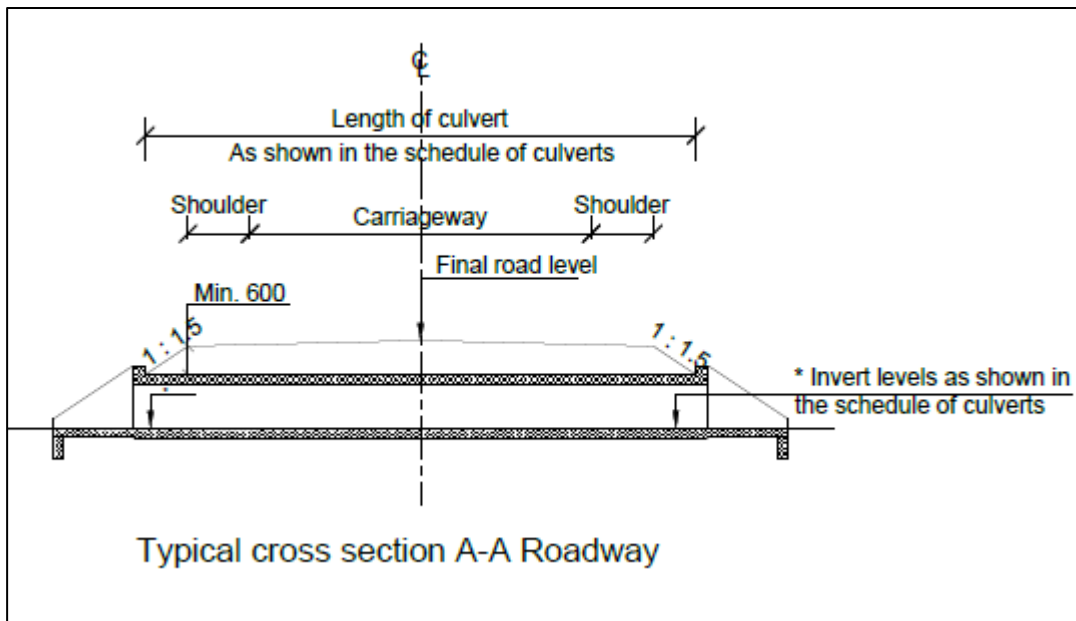


FIGURE C.16. – SINGLE CELL BOX CULVERT



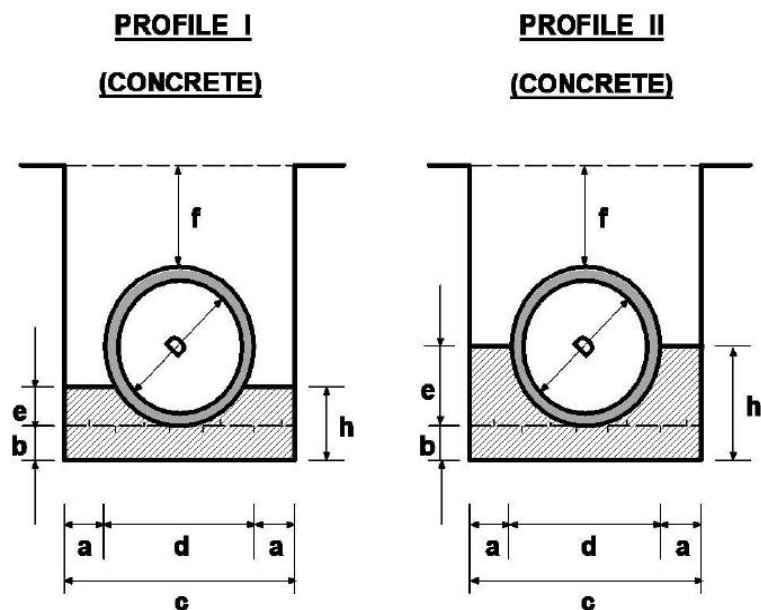


Single cell box culvert										
Height, H	m	1.00								
Span, S	m	1.00	1.50	1.50	2.00	2.00	2.50	2.50	3.00	3.00
Max fill over top	m	<10.00	<2.50	<10.00	<2.50	<10.00	<2.50	<10.00	<2.50	<10.00
Concr.	T1	m	0.25	0.30	0.30	0.30	0.30	0.35	0.40	0.50
Reinforce- ment	" a " Bars	Y Size, @ spacing	Y12 @150	Y12 @200	Y16 @150	Y16 @250	Y20 @200	Y16 @250	Y20 @150	Y16 @150
	" b " Bars	Y Size, @ spacing	Y12 @150	Y12 @200	Y16 @125	Y16 @200	Y20 @150	Y16 @200	Y25 @150	Y16 @150
	" c " Bars	Y Size, @ spacing								
	" d " Bars	Y Size, @ spacing								
Quan.	Blinding concrete	m ³ / m.run	0.08	0.11	0.11	0.13	0.13	0.16	0.17	0.19
	Reinforced concrete	m ³ / m.run	1.25	1.86	1.86	2.16	2.16	2.94	3.44	5.00
	Reinforcement	kg / m.run	112.2	120.4	205.2	174.2	279.3	203.1	444.0	577.0

1.50				2.00				2.50	
1.50	1.50	2.00	2.00	2.00	2.00	2.50	2.50	2.50	2.50
<2.50	<10.00	<2.50	<10.00	<2.50	<10.00	<2.50	<10.00	<2.50	<10.00
0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.40	0.35	0.40
Y12 @150	Y16 @150	Y16 @250	Y20 @200	Y16 @250	Y20 @200	Y16 @250	Y20 @150	Y16 @250	Y20 @150
Y12 @150	Y16 @125	Y16 @200	Y20 @150	Y16 @200	Y20 @150	Y16 @200	Y25 @150	Y16 @200	Y25 @150
Y12 @200									
Y12 @200									
0.11	0.11	0.13	0.13	0.13	0.13	0.16	0.17	0.16	0.17
2.16	2.16	2.46	2.46	2.76	2.76	3.64	4.24	3.99	4.64
157.3	228.9	193.7	304.8	213.2	330.3	242.1	503.2	261.6	532.9

3.00				3.60			
3.00	3.00	5.00	5.00	3.60	3.60	5.00	5.00
<2.50	<10.00	<2.50	<10.00	<2.50	<10.00	<2.50	<10.00
0.40	0.50	0.50	0.80	0.50	0.60	0.50	0.80
Y16 @150	Y25 @200	Y20 @125	Y25 @125	Y16 @150	Y25 @150	Y20 @125	Y25 @125
Y16 @150	Y25 @150	Y20 @125	Y25 @100	Y16 @150	Y25 @150	Y20 @125	Y25 @100
0.19	0.20	0.30	0.33	0.23	0.24	0.30	0.33
5.44	7.00	9.00	15.36	8.20	10.08	9.60	16.32
397.2	706.8	843.8	1462.2	477.6	977.4	883.3	1515.0

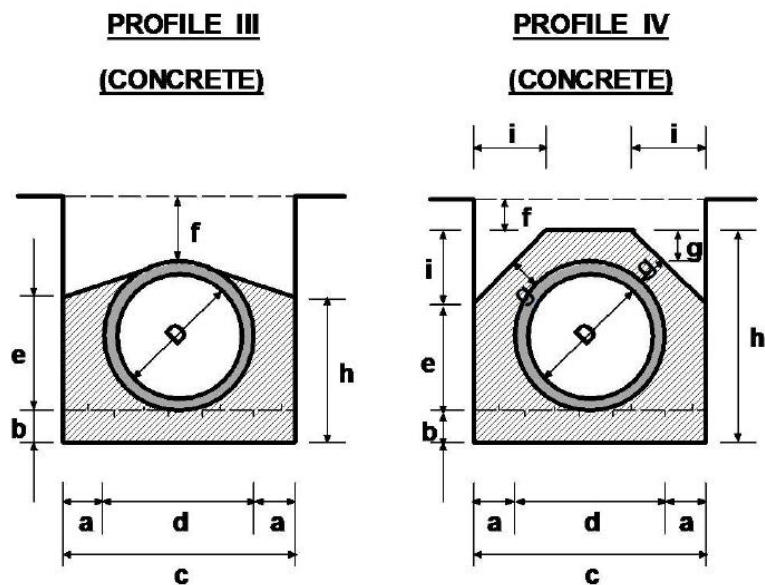
FIGURE C.17. – BEDDING AND HAUNCH PROFILES TYPES I & II



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 (m ³ /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 (m ³ /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.18. – BEDDING AND HAUNCH PROFILES TYPES III & IV



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 (m ³ /m)		
	0.26	0.47	0.71
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
0.46	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 (m ³ /m)		
0.37	0.61	0.92
- Fair to poor subgrade Condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
- Use gravel material for back/ overfill.		

FIGURE C.19. – MASONRY DRIFT

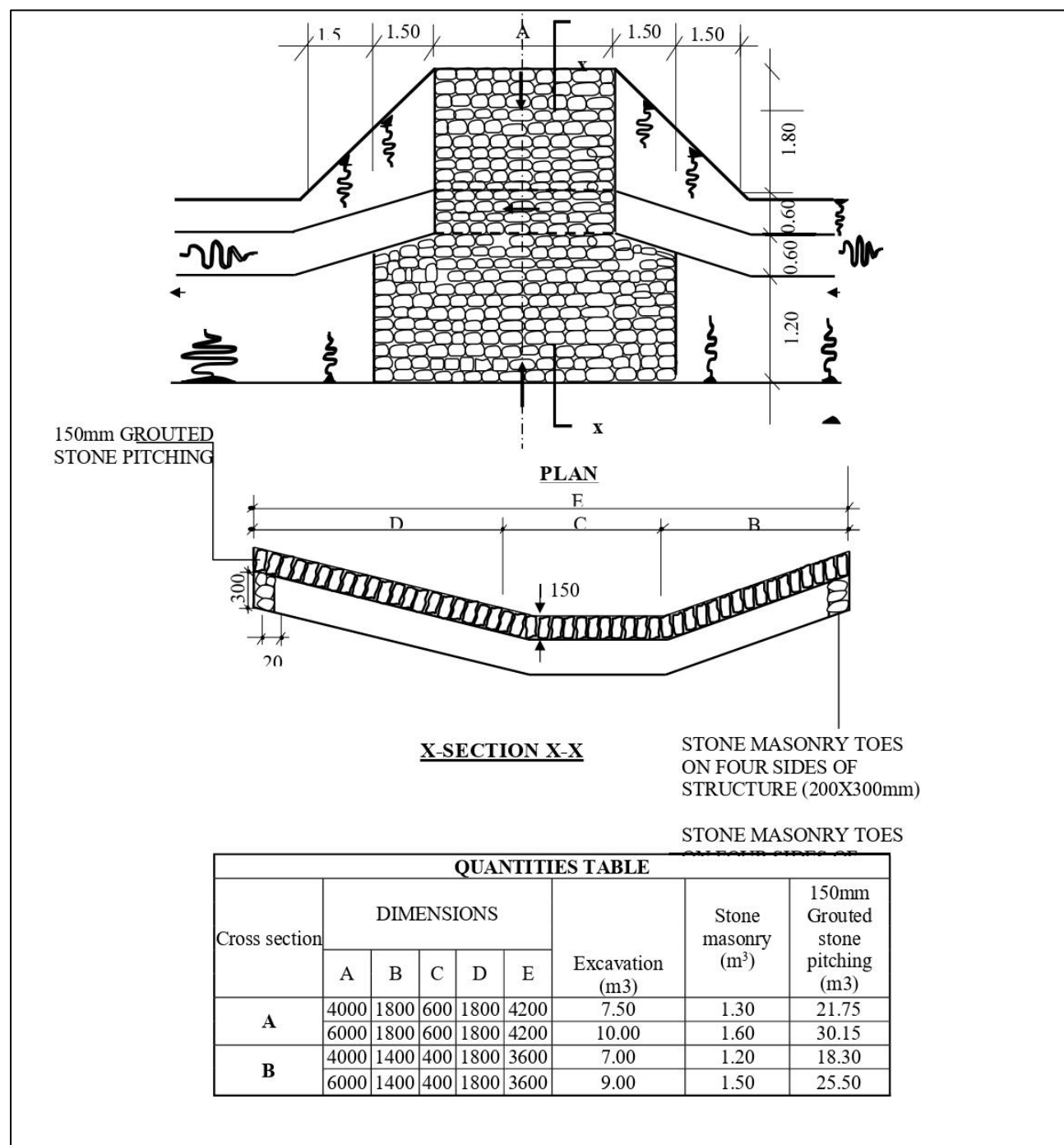


FIGURE C.20. – NORMAL CONCRETE DRIFT

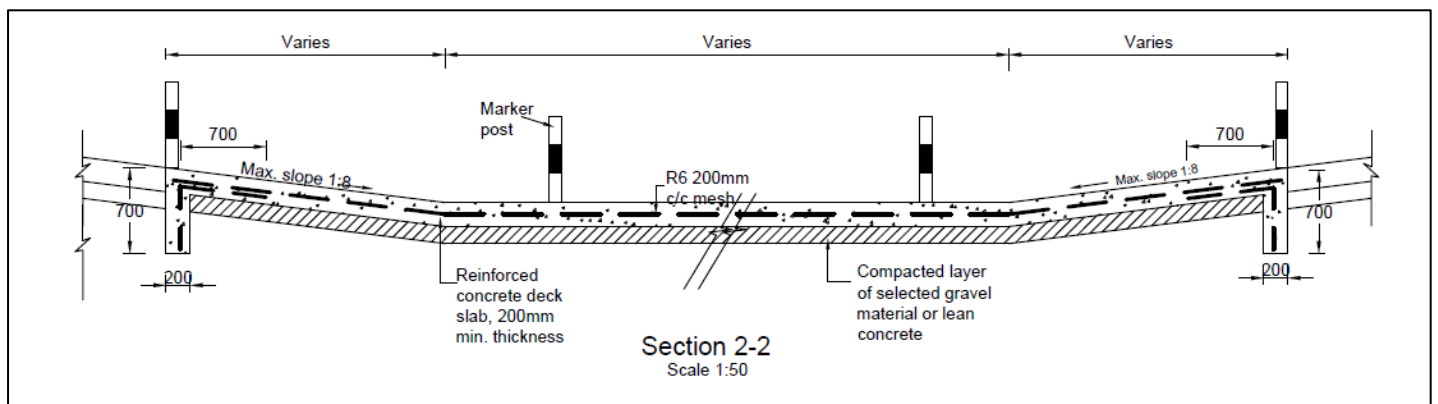
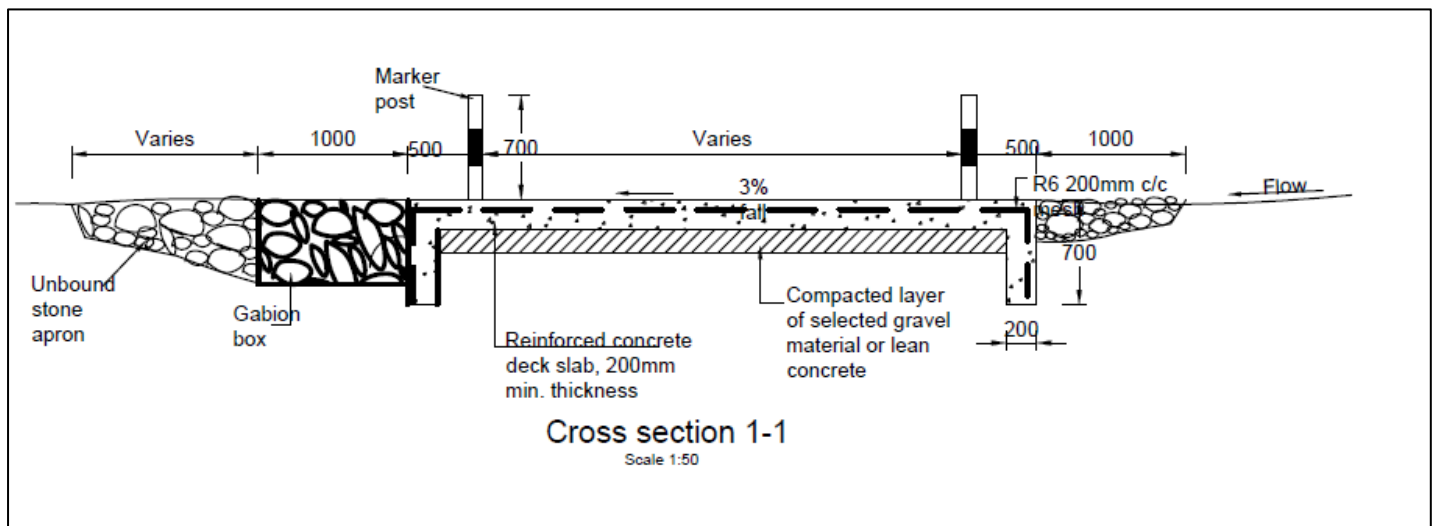
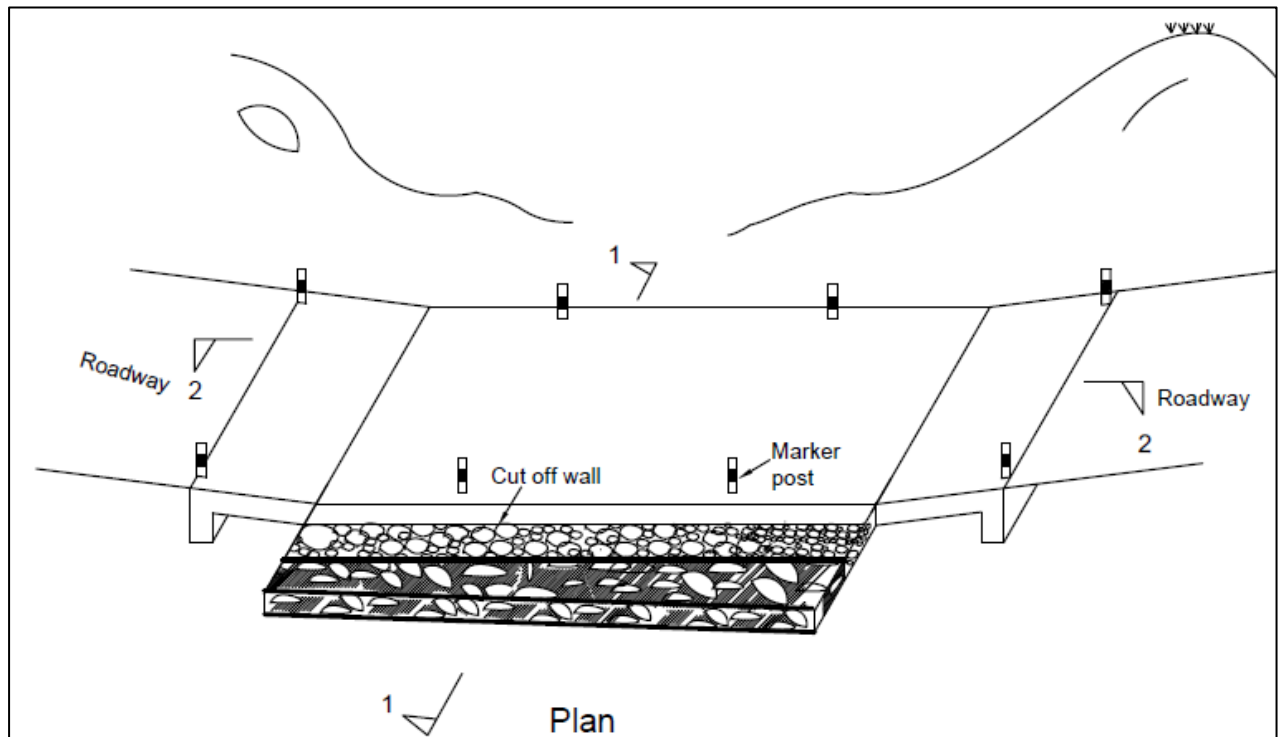
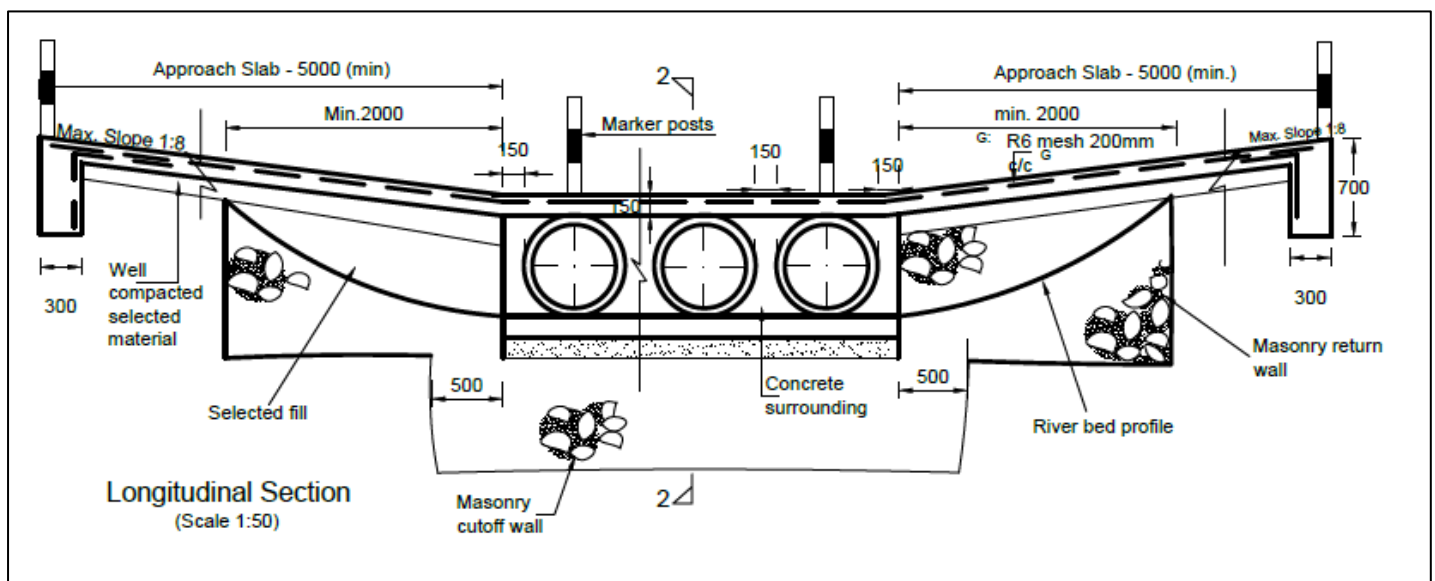
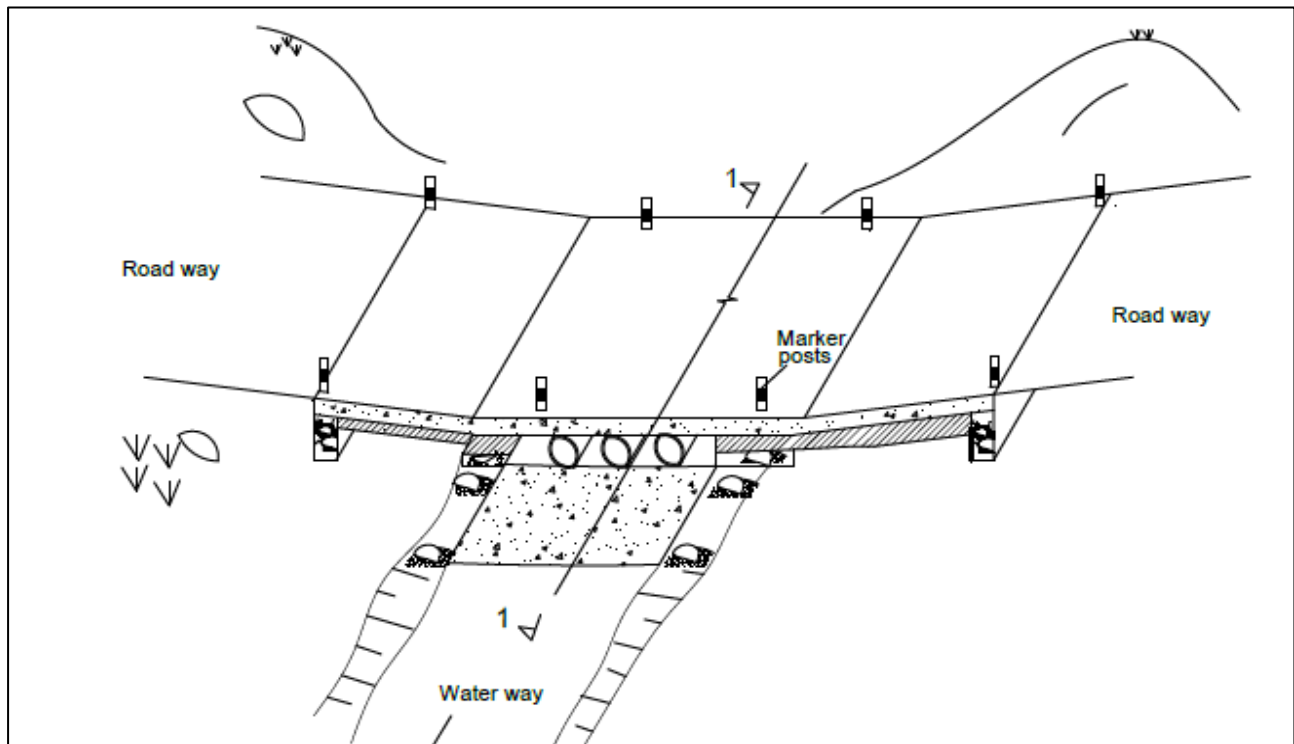


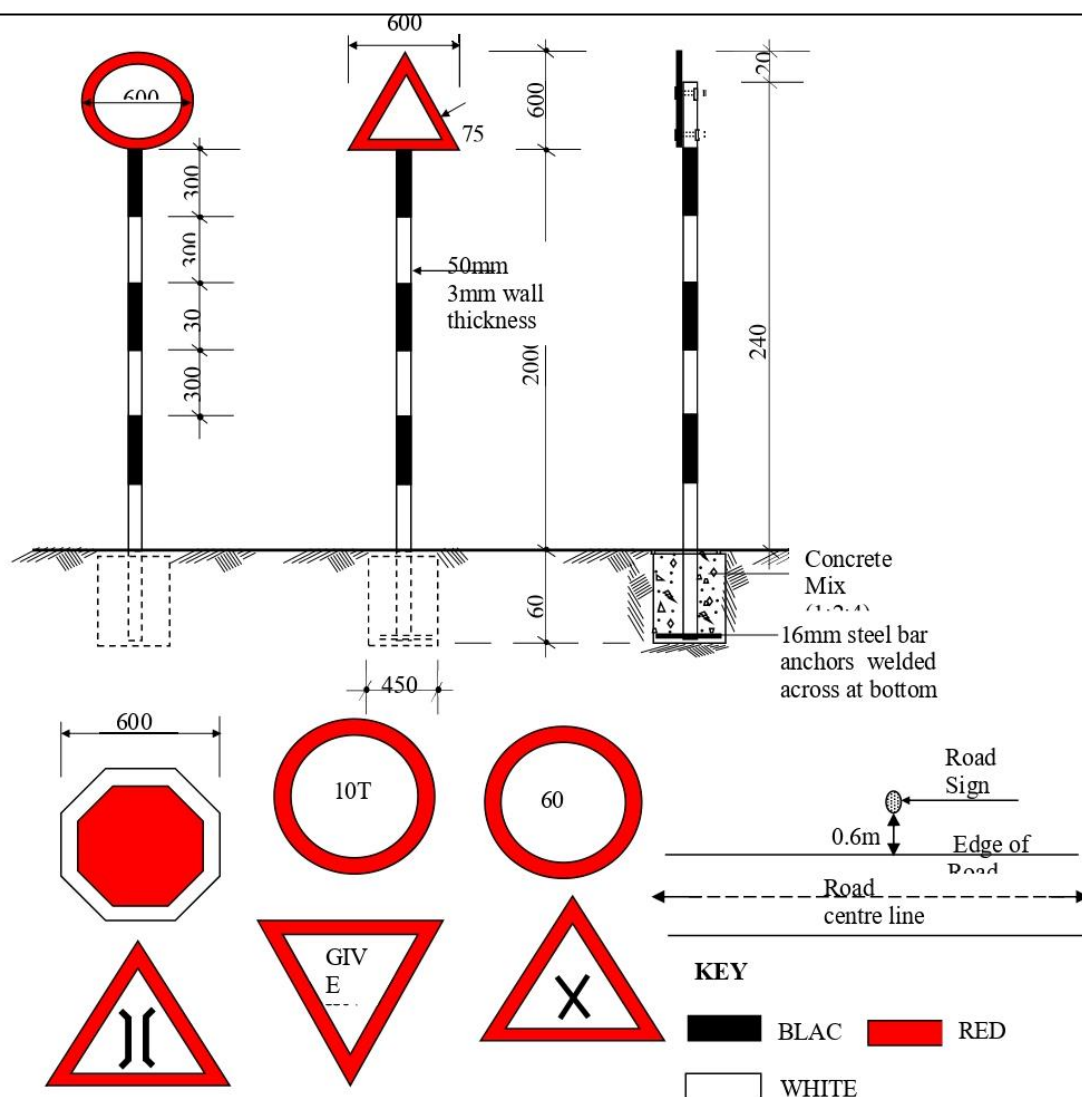
FIGURE C.21. – VENTED CONCRETE DRIFT



Notes:

1. All dimensions are in millimetres unless otherwise stated.
2. Structure should not reduce the cross section area of the water course
3. Concrete shall be Class 30

FIGURE C.22. – TRAFFIC SIGNS



1. The type of sign required and their location shall be as shown on the improvement plan and as directed by the Engineer
2. Sign plate to be 2 mm thick mild steel plate
3. Sign post to be 50 mm internal diameter steel pipe with wall thickness of 3 mm.
4. Sign plate to be fixed to steel tube by 4 Nos M10 bolts and 2 Nos 50 mm fixing clamps/brackets.
5. Sign paints shall be reflective.
6. The sign plate and post shall be treated by applying two coats of lead red oxide paint before applying priming and two finish coats of approved paints. Paints used shall have a hard,

FIGURE C.23. – EDGE MARKER POST

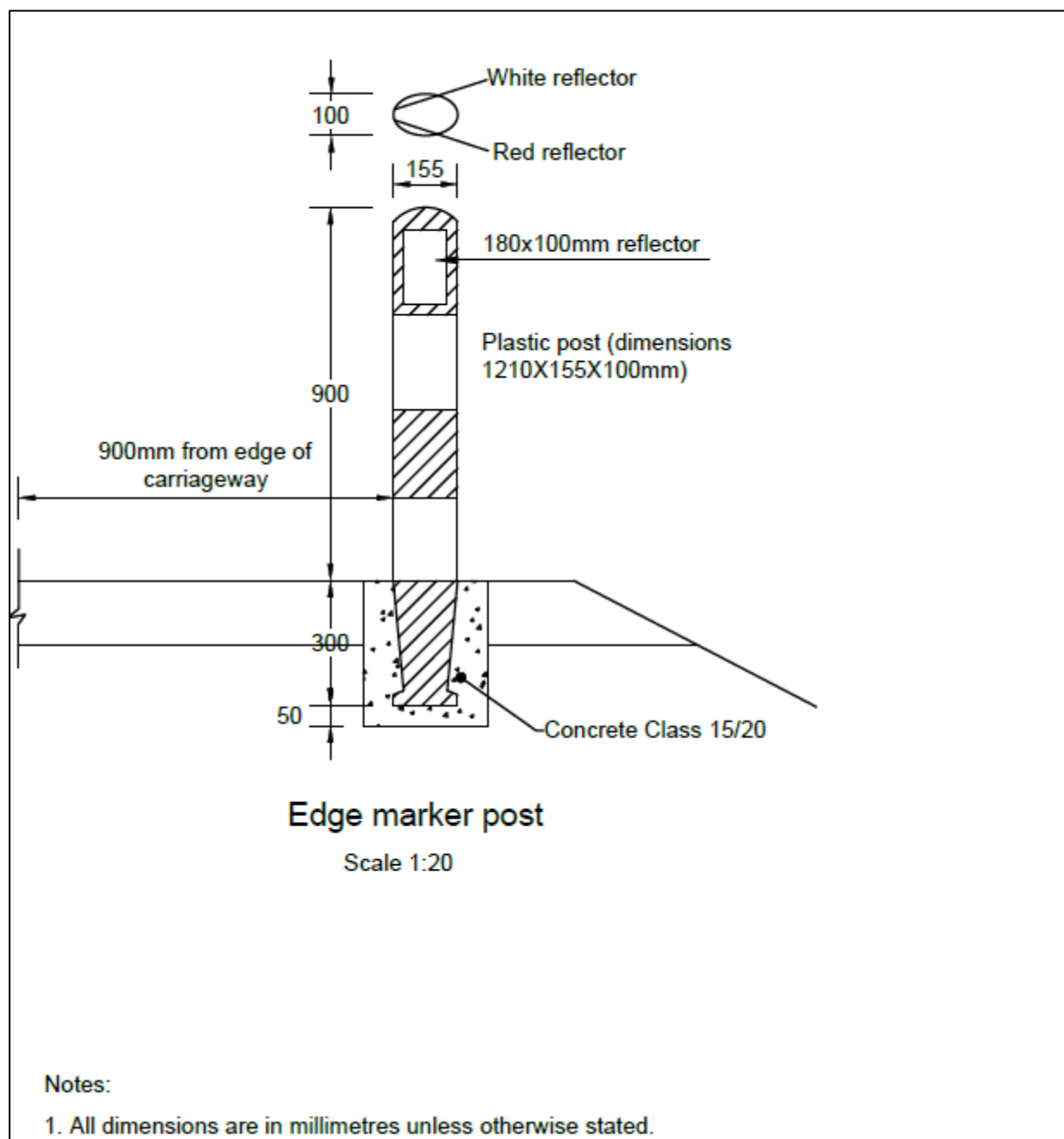
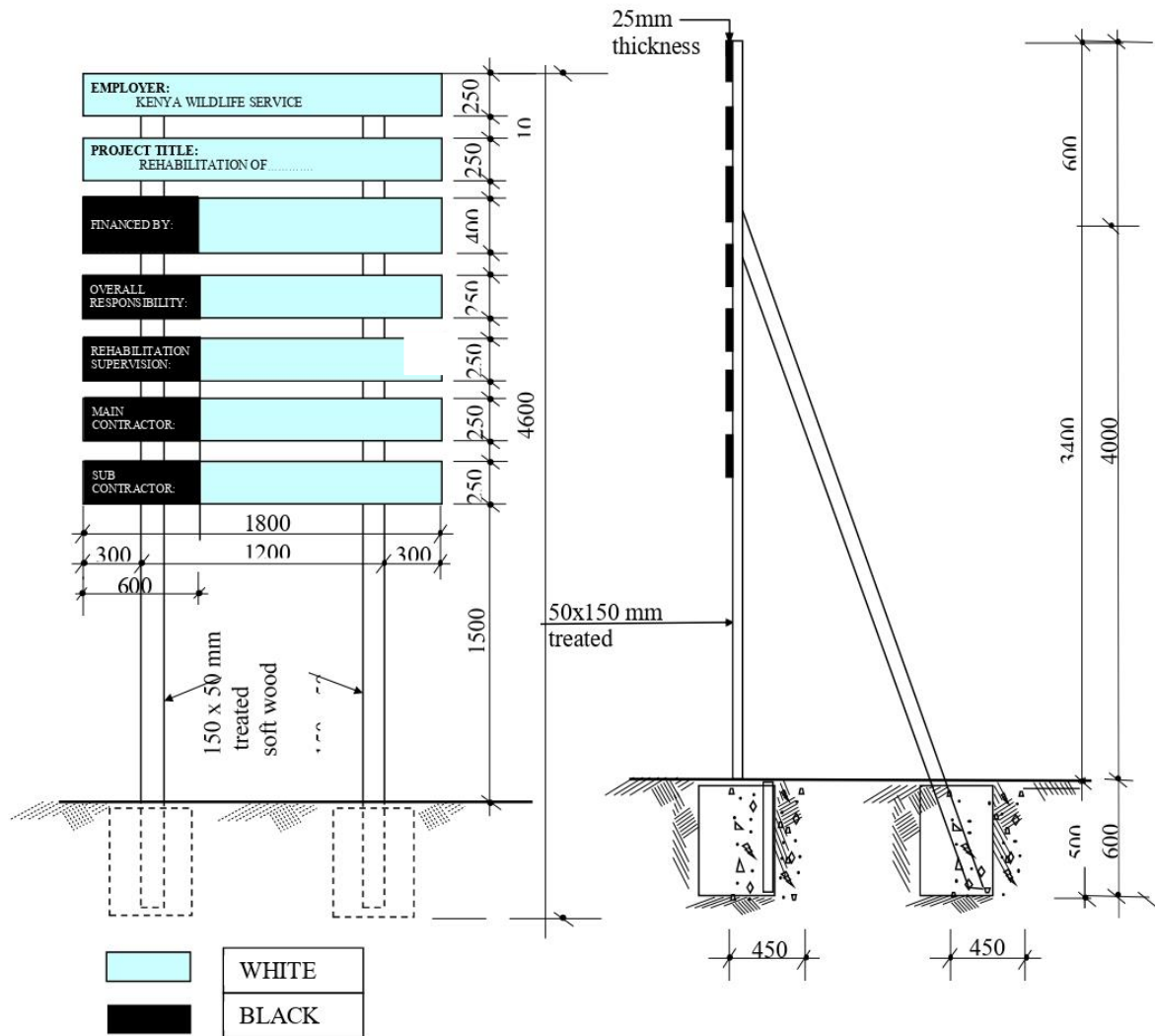


FIGURE C.24. – PUBLICITY SIGN BOARD



NOTES

1. The wording of the project signboard and the location to be installed to be as directed by the Engineer
2. Materials to be used for fabrication of signboard shall be pressure impregnated treated softwood timber sizes as indicated in the drawing
3. Wording boards to be nailed to the posts using nails.
4. Project board posts and struts to be embedded in concrete ratio 1:2:4

SCHEDULE 1: CERTIFICATE OF SITE VISIT & DECLARATION OF TENDERER'S KNOWLEDGE OF SITE

1. This is to certify that
[Name/s]
Being the authorized representative/Agent of [Name of Bidder]
.....
.....
has undertaken the inspection of site in accordance with the instruction to Bidders, for purposes of bidding for routine maintenance of
.....
.....
[name and location of the project] held on Day of 20.....
2. Having studied the tender document, I carefully examined the site to make myself familiar with the local conditions likely to influence the works and cost thereof.
3. I further certify that I am satisfied with the description of the works and I understand perfectly the scope of the works as specified and implied in the performance of the contract

Signed and Stamped
(Bidder's Representative)

Signed
(Procuring Entity Representative during Site Visit)

NOTE: This form Must be completed and duly signed during the Organized site visit and submitted together with the bid.

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VI - GENERAL CONDITIONS

A. CONTRACT AND INTERPRETATION

1. Definitions

1.1 Bold face type is used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Contractor's Tender.

The Certificate of Completion is a document issued by the Engineer upon completion of Rehabilitation Works, Improvement Works and Emergency Works, or parts thereof, as applicable, in accordance with GC 54.1

The Completion Date is the date of completion of the Services and Works as certified by the Engineer, in accordance with Sub-Clause 10.2.

The Contract is the Contract between the Procuring Entity and the Contractor to perform the services to be provided by the Contractor, and to execute, complete, and maintain the Works. It consists of the documents listed in Clause 3 below.

The Contractor is a person or corporate body whose Tender to carry out the Works and Services has been accepted by the Procuring Entity.

The Contractor's Tender is the completed tendering document submitted by the Contractor to the Procuring Entity.

The Contract Price is the price stated in the Form of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A Defect is any part of the Works and Services not completed in accordance with the Contract.

The Defects Liability Certificate is the certificate issued by Engineer upon correction of defects by the Contractor.

The Defects Liability Period is the period specified in the Contract and is applicable for Rehabilitation Works and Improvement Works, with exclusions identified in the **PC**, if any.

Drawings include calculations and other information provided by the Contractor for the execution of the Contract.

Emergency Works is a set of necessary and sufficient activities to reinstate the Road and reconstruct its structure or right of way strip damaged as a result of natural phenomena with imponderable consequences, such as strong storms, flooding and earthquakes. The need for execution of Emergency Works is jointly identified by the Procuring Entity and the Contractor and for starting of execution of Emergency Works the Procuring Entity shall issue a Work Order.

The Procuring Entity is the party who employs the Contractor to carry out the Works and Services.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works and to carry out the Services.

Improvement Works consists of a set of interventions that add new characteristics to the Road in response to existing or new traffic, safety or other conditions, as defined in the Specifications.

Rehabilitation Works are specific and clearly defined civil works the Contractor is required to the conditions of the Contract, as defined in the Specifications. Rehabilitation Works quantities were estimated by the Contractor to achieve the performance standards defined by the Service Levels and offered at a Lump- Sum price.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works and Services. The Intended Completion Date is specified in the Special Conditions (SCC). The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works and for provision of Services.

The Engineer is the person named in the contract who is responsible for the overall administration of the Contract on behalf of the Procuring Entity, and the supervision of works and services to be performed thereunder. The Engineer may delegate through a written instrument some of his functions to any other competent person, retaining however the overall responsibility for the actions of that person. The Engineer may not delegate the overall administrative control of the Contract.

Road means the road or network of roads for which the Works and Services are contracted under the Contract.

The Road Management Office is the location indicated by the Contractor from which the Road Manager operates, and where the Contractor shall receive notifications.

The Road Manager is a person appointed by the Contractor who is in charge of managing all activities of the Contractor under the Contract. He is also the Contractor's Representative for the purposes of this contract.

Services means all interventions on the Road under the Contract and all activities related to the management and evaluation of the Road which shall be carried out by the Contractor in order to achieve and keep the Road Performance Standard's as defined by the Service Levels, and to receive full payment of the monthly fee under the contract.

Service Levels are the minimum performance standards for the level of quality of conditions of the Road defined in the Specifications which the Contractor shall comply with.

The Site is the area defined as such in the **PC**.

Site Investigation Reports are those that were included in the tendering document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

The Start Date is the date when the Contractor has started the physical execution of the Works and Services on the site. It does not necessarily coincide with any of the Site Possession Dates.

A Subcontractor is a person or corporate body who has a contractual agreement with the Contractor to carry out certain activities related to the services to be provided under the contract, which may include work on the Site.

Specifications means the Specifications of the Works and Services included in the Contract and any modification or addition made or approved by the Engineer.

A Variation is an instruction given by the Engineer which varies the Works or Services.

The Works are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, as covered under Rehabilitation Works, Improvement Works and Emergency Works.

Work Order is an order issued by the Engineer to the Contractor authorizing the execution of Improvement Works and Emergency Works, as provided for in Clause 27 hereunder.

Public Procurement Regulatory Authority is a Statutory Government Agency responsible for oversight of public procurement.

2. Interpretation

- 2.1.1 In interpreting these General Conditions (GC), singular also means plural, male also means female or neuter, and vice versa. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these General Conditions (GC).

3. Documents Forming the Contract

3.1 The documents forming the Contract shall be interpreted in the following order of priority:

- 1) Agreement,
- 2) Form of Acceptance,
- 3) Contractor's Tender,
- 4) Special Conditions of Contract (SCC),
- 5) General Conditions of Contract (GCC),
- 6) Specifications,
- 7) Drawings,
- 8) Bill of Quantities, and
- 9) Any other document listed in the **PC** as forming part of the Contract.

4. Language and Law

4.1 The governing language shall be English and the law governing the Contract shall be the laws of Kenya.

5. Notices

5.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, air mail post, special courier, or E-mail to the address of the relevant party set out in the **PC**, with the following provisions:

5.1.1 Any notice sent by E-mail shall be confirmed within two (2) days after dispatch by notice sent by air mail post or special courier, except as otherwise specified in the Contract.

5.1.2 Any notice sent by air mail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.

5.1.3 Any notice delivered personally or sent by E-mail shall be deemed to have been delivered on date of its dispatch.

5.1.4 Either party may change its postal, E-mail address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.

5.2 Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.

5.3 The Contractor shall provide at its own cost, and maintain in operation permanently during the duration of the Contract, such communications equipment which ensures that both written (E-mail) and oral (voice) communications can be established at all times:

- a) Between the Road Manager and his senior field staff;
- b) Between the Engineer and the Road Manager;
- c) Between the public telephone system and the Road Manager;
- d) The equipment to be provided and maintained includes the equipment located at the Engineer's office.

5.4 At the Start Date of the Contract, the Contractor must communicate to the Procuring Entity the address of his office, including the postal, fax and E-mail address, which for the purposes of this contract is called the Road Management Office, where Notices will be addressed to. The Procuring Entity may require that the physical location of the Road Management Office is within the close geographical area of the Road. If the Contractor fails to communicate the address of his Road Management Office, and the Procuring Entity is otherwise unable to locate the Road Manager, all notifications to the Contractor shall be valid if they are deposited at a designated location within the office of the Engineer, and if a copy is sent to the Contractor's legal address.

6. Settlement of Claims and Disputes

6.1 Filing Claims or dispute or difference of any kind

- 6.1.1 A Party to the Contract may file a claim or dispute or difference of any kind to the other party by giving a notice and requesting that the parties get together and resolve or act on the claims or dispute or difference amicably.

6.2 Amicable Settlement

- 6.2.1 If any claims or dispute or difference of any kind whatsoever shall arise between the Procuring Entity and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Works and Services—whether during the progress of the execution or after completion and whether before or after the termination, abandonment or breach of the Contract- the parties shall seek to resolve any such claims, dispute or difference by mutual consultation.
- 6.2.2 If the parties fail to resolve such a claim or dispute or difference amicably by mutual consultation, then the matter in dispute shall, in the first place, be referred in writing by either party to Arbitration. Either the Procuring Entity or the Contractor may, give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. The arbitral tribunal shall have full power to open up, review, and revise any decision, opinion, instruction, determination, and certificate.
- 6.2.3 The Party giving a Notice in accordance with Sub-Clause 6.2.2 above should move to commence arbitration after 28 days from the day on which a claim or dispute or difference was given, even if no attempt at an amicable settlement has been made.
- 6.2.4 Within 28 days after receiving a claim or dispute or difference or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim or dispute or difference within the above defined time period.
- 6.2.5 Within the above defined period of 28days, the Engineer shall proceed to agree or determine the Contractors claim or dispute or difference and any additional payment (if any) to which the Contractor is entitled under the Contract.
- 6.1.8 If the Engineer does not respond within the timeframe defined in sub clause 6.2.3, either Party may consider that the claim is rejected by the Engineer and any of the Parties may refer to Arbitration in accordance with Sub- Clause 6.3.

6.3 Arbitration

- 6.2.1 Any claim or dispute or difference in respect of which a notice of intention to commence arbitration has been given, in accordance with Sub-Clause 6.2.4, shall be finally settled by arbitration. Neither party shall be limited in the proceedings before such arbitration tribunal on any matter whatsoever relevant to the dispute Arbitration may be commenced prior to or after completion of the Works and Services.
- 6.3.1 Notwithstanding any reference to the Arbitration herein,
- a The parties shall continue to perform the irrespective obligations under the Contract unless they otherwise agree; and
 - b The Procuring Entity shall pay the Contractor any monies due to the Contractor.

6.4 Matters that may be referred to arbitration

- 6.4.1 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 Engineer upon the said person ceasing to act.
 - b. Whether or not the issue of an instruction by the Engineer is empowered by these Conditions.

- c. Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- b. Any dispute arising in respect of war risks or war damage.
- c. 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.

6.5 Arbitration Proceedings

6.5.1 Arbitration proceedings shall be conducted in accordance with the following rules of procedure.

6.5.2 International arbitration with proceedings

6.5.3 If the contract is with a foreign contractor, arbitration proceedings shall be administered by the arbitration institution designated in the Special Conditions of Contract, and conducted under the rules of arbitration of such institution; or, if so specified in the Special Conditions of Contract, international arbitration in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or if neither an arbitration institution nor UNCITRAL arbitration rules are specified in the Special Conditions of Contract, with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules.

6.5.5 The place of arbitration shall be the neutral location specified in the Special Conditions of Contract; and the arbitration shall be conducted in the English language for communications as defined in Sub-Clause 1.4 [Law and Language].

6.5.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

6.5.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for a notice of intention to commence arbitration has been given.

6.5.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Engineer shall not be altered by reason of any arbitration being conducted during the progress of the Works.

6.5.9 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.

6.5.10 The decision of the Arbitration shall be final.

6.5.11 National arbitration with proceedings

6.5.12 If the Contract is with a national contractor, arbitration proceedings shall have conducted in accordance with the Arbitration Laws of Kenya.

6.5.13 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;

- a. Institution of Engineers of Kenya
- b. Chartered Institute of Arbitrators (Kenya Branch)

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

- 6.5.14 Failure to Comply with Arbitrator's Decision-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 the Court of Law.

B. ASSIGNMENT OF RESPONSIBILITIES

7. Scope of Works and Services

- 7.1 Unless otherwise expressly limited in the Specifications, the Contractor's obligations cover the Design, the carrying out of all Works and the performance of all Services required for keeping the Road in accordance with the Service Levels defined in the Specifications, while at the same time respecting the plans, procedures, specifications, drawings, codes and any other documents as identified in the Specifications. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labor, materials, equipment; Contractor's Equipment; construction utilities and supplies; temporary materials, structures and facilities; transportation (including, without limitation, unloading and hauling to, from and at the Site); and storage, except for those supplies, works and services that will be provided or performed by the Procuring Entity, if any, as set forth in the corresponding Specifications.
- 7.2 The Contractor shall, unless specifically excluded in the Contract, perform all such work, services and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining the Performance Standard's (as specified in Clause 24 of GC) as if such work, services and/or items and materials were expressly mentioned in the Contract.

8. Design Responsibility

- 8.1 The Contractor shall be responsible for the design and programming of the Works and Services, and for the accuracy and completeness of the information used for that design and programming in accordance with the requirements established in the Specifications.

8.2 Specifications and Drawings

- 8.2.1 The Contractor shall execute the basic and detailed design and the engineering work in compliance with the provisions of the Contract and the Specifications, or where not so specified, in accordance with good engineering practice. The Contractor shall be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents that it has prepared, whether such specifications, drawings and other documents have been approved by the Engineer or not, provided that such discrepancies, errors or omissions are not because of inaccurate information furnished in writing to the Contract or by or on behalf of the Procuring Entity.
- 8.2.2 The Contractor shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof, provided or designated by, or on behalf of, the Procuring Entity, by giving a notice of such disclaimer to the Engineer.

8.3 Codes and Standards

Wherever references are made in the Contract to codes and standard's in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standard's current at the date twenty-eight (28) days prior to date of Tender submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied after approval by the Procuring Entity and shall be treated in accordance with Clause 63.

8.4 Approval/Review of Technical Documents by Engineer

- 8.4.1 For those Works specified in the **PC**, the Contractor shall prepare (or cause its Subcontractors to prepare) and furnish to the Engineer the documents listed in the Specifications (List of Documents for Approval or Review) for its approval or review.

Unless otherwise specified in the **PC**, the Contractor shall not be required to submit for the Procuring Entity's approval the Design or other technical documents concerning the Maintenance Services remunerated through monthly lump-sum payments. Any part of the Works covered by or related to the documents to be approved by the Engineer shall be executed only after the Engineer's approval thereof. Sub-Clauses 8.4.2 through 8.4.7 shall

Apply only to those documents requiring the Engineer's approval, but not to those furnished to the Engineer for his information or review only.

- 8.4.2 Within fourteen (14) days after receipt by the Engineer of any document requiring the Engineer's approval in accordance with Sub-Clause 8.4.1, the Engineer shall either return one copy thereof to the Contractor with its approval endorsed thereon or shall notify the Contractor in writing of its disapproval thereof and the reasons therefore and the modifications that the Engineer proposes. If the Engineer fails to take such action within the said fourteen (14) days, then the said document shall be deemed to have been approved by the Engineer.
- 8.4.3 The Engineer shall not disapprove any document, except on the grounds that the document does not comply with some specified provision of the Contractor that it is contrary to good engineering practice.
- 8.4.4 If the Engineer disapproves the document, the Contractor shall modify the document and resubmit it for the Engineer's approval in accordance with Sub-Clause 8.4.2. If the Engineer approves the document subject to modification(s), the Contractor shall make the required modification(s), whereupon the document shall be deemed to have been approved.
- 8.4.5 If any dispute or difference occurs between the Procuring Entity and the Contractor in connection with or arising out of the disapproval by the Engineer of any document and/or any modification(s) thereto that cannot be settled between the parties within a reasonable period, then such dispute or difference may be referred to Arbitration for determination in accordance with Sub-Clause 6.3 hereof. If such dispute or difference is referred to Arbitration, the Engineer shall give instructions as to whether and if so, how, performance of the Contract is to proceed. The Contractor shall proceed with the Contract in accordance with the Engineer's instructions, provided that if the Arbitration upholds the Contractor's view on the dispute, then the Contractor shall be reimbursed by the Procuring Entity for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the dispute and the execution of the instructions as the Arbitration shall decide, and the Time for Completion shall be extended accordingly.
- 8.4.6 The Engineer's approval, with or without modification of the document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Engineer.
- 8.4.7 The Contractor shall not depart from any approved document unless the Contractor has first submitted to the Engineer an amended document and obtained the Engineer's approval thereof, pursuant to the provisions of Sub-Clause 8.4.4. If the Engineer requests any change in any already approved document and/or in any document based thereon, the provisions of Clause 63.2 shall apply to such request.

9 Copyright

- 9.1 The copyright in all drawings, documents and other materials containing data and information prepared by Contractor and furnished to the Procuring Entity herein shall remain vested in the Contractor. Similarly, the copyright in all drawings, documents and other materials containing data and information prepared by the Procuring Entity and furnished to the contractor shall remain vested in the Procuring Entity and if they are furnished to the Procuring Entity directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

10 Start Date and Completion

- 10.1.1 The Contractor shall start the Works and Services within the period specified in the **PC**. Upon request from the Contractor, the Procuring Entity shall confirm in writing the Start Date, after verifying that works and services have started on the Site.
- 10.1.2 The Contractor shall attain the required Service Levels and the Completion of the Rehabilitation and Improvement Works (or of a part where a separate time for Completion of such part is specified in the Contract) within the time schedules included in the **PC** and the Specifications, or within such extended time to which the Contractor shall be entitled under Clause 64 hereof.

11 Contractor's Responsibilities

- 11.1 The Contractor shall design and carry out the Works and Services (including associated purchases and/or subcontracting) necessary to comply with the requirements established in the Specifications with due care and diligence in accordance with the Contract.

- 11.2 The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Works and Services required, including any data and tests provided by the Procuring Entity, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site and of other data readily available to it relating to the Road as of the date twenty-eight (28) days prior to Tender submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Works and Services.
- 11.3 The Contractor shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country of the Procuring Entity that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Procuring Entity under Sub-Clause 14.3 hereof and that are necessary for the performance of the Contract.
- 11.4 The Contractor shall comply with all laws in force in the country of the Procuring Entity and where the Works and Services are carried out. The laws will include all local, state, national or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the Procuring Entity from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to Sub-Clause 14.1 hereof.
- 11.5 Any Plant, Material and Services that will be incorporated in or be required for the Works and Services and other supplies shall have their origin in an eligible Country as defined under ITT.
- 11.6 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 Goods in such form and details as will clearly identify relevant time changes and costs.
- 11.7 Pursuant to paragraph 2.2 e. of Appendix A to the General Conditions, the Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the PPRA or persons appointed by the PPRA 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 PPRA. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 66.1 which provides, inter alia, that acts intended to materially impede the exercise of the PPRA's inspection and audit rights constitute a prohibited practice subject to contract termination.

12 Subcontracting

- 12.1 The Contractor may subcontract activities listed in the **PC**. Any other activity under the Contract may be subcontracted only when approved by the Engineer. The Contractor may not assign the entire Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations nor relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.
- 12.2 Notwithstanding Sub-Clause 12.1, the Contractor may subcontract under his own responsibility and without prior approval of the Procuring Entity the small Works and Services also listed in the **PC**.

13 Assignment of Contract

- 13.1 Neither the Procuring Entity nor the Contractor shall, without the express prior written consent of the other party (which consent shall not be unreasonably withheld), assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.

14 Procuring Entity's Responsibilities

- 14.1 The Procuring Entity shall apply due diligence to ensure the accuracy of all information and/or data to be supplied to the Contractor as described in the Specifications, except when otherwise expressly stated in the Contract.

- 14.2 The Procuring Entity shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the corresponding Specifications. The Procuring Entity shall give full possession of an accord all rights of access thereto on or before the date(s) specified in the **PC**.
- 14.3 The Procuring Entity shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located, when such authorities or undertakings require the Procuring Entity to obtain them in the Procuring Entity's name, are necessary for the execution of the Contract, and are specified in the corresponding Specifications.
- 14.4 If requested by the Contractor, the Procuring Entity shall use its best endeavors to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local, state or national government authorities or public service undertakings that such authorities or undertakings require the Contractor or Subcontractors or the personnel of the Contractor or Subcontractors, as the case may be, to obtain.
- 14.5 The Procuring Entity shall be responsible for the continued operation of the Road after Completion, in accordance with Clause 28, and shall be responsible for facilitating the Guarantee Test(s) for the Road, in accordance with Clause 20.
- 14.5.1 All costs and expenses involved in the performance of the obligations under this Clause 14 shall be the responsibility of the Procuring Entity, save those to be incurred by the Contractor with respect to the performance of Guarantee Tests, in accordance with Clause 20.

15 Confidential Information

- 15.1 The Procuring Entity and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Procuring Entity to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this Clause 15.
- 15.2 The Procuring Entity shall not use such documents, data and other information received from the Contractor for any purpose other than the operation and maintenance of the Road. Similarly, the Contractor shall not use such documents, data and other information received from the Procuring Entity for any purpose other than the design, procurement of Plant and Equipment, construction or such Works and Services as are required for the performance of the Contract.
- 15.3 The obligation of a party under Sub-Clauses 15.1 and 15.2 above, however, shall not apply to that information which
- a) Now or hereafter enters the public domain through no fault of that party;
 - b) Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party hereto;
 - c) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 15.4 The above provisions of this Clause 15 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Works and Services or any part thereof.
- 15.5 The provisions of this Clause 15 shall survive termination, for whatever reason, of the Contract.

C. EXECUTION OF WORKS AND SERVICES

16 Representatives

16.1 Engineer

16.2 If the Engineer is not named in the Contract, then within fourteen (14) days of the issuance of the Form of Acceptance by the Procuring Entity, the Procuring Entity shall appoint and notify the Contractor in writing of the name of the Engineer. The Procuring Entity may from time to time appoint some other person as the Engineer in place of the person previously so appointed, and shall give a notice of the name of such other person to the Contractor without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of the Works and Services. Such appointment shall only take effect upon receipt of such notice by the Contractor. The Engineer shall represent and act for the Procuring Entity at all times during the period of the Contract. All notices, instructions, orders, certificates, approvals and all other communications under the Contract shall be given by the Engineer, except as herein otherwise provided.

16.3 All notices, instructions, information and other communications given by the Contractor to the Procuring Entity under the Contract shall be given to the Engineer, except as herein otherwise provided.

16.4 The Engineer may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

16.2 Road Manager

16.2.1 If the Road Manager is not named in the Contract, then the Contractor shall appoint the Road Manager before the Start Date and shall request the Procuring Entity in writing to approve the person so appointed. If the Procuring Entity makes no objection to the appointment within fourteen (14) days, the Road Manager shall be deemed to have been approved. If the Procuring Entity objects to the appointment within fourteen (14) days giving the reason therefore, then the Contractor shall appoint a replacement within fourteen (14) days of such objection, and the foregoing provisions of Sub-Clause 16.2.1 shall apply thereto.

16.2.2 The Road Manager shall represent and act for the Contractor at all times during the period of the Contract and shall give to the Engineer all the Contractor's notices, instructions, information and all other communications under the Contract. The Road Manager shall be in charge of the day-to-day management of the works and services to be provided under the contract on behalf of the Contractor, and shall have legal and all other faculties to take all necessary decisions related to the execution of the contract.

16.2.3 All notices, instructions, information and all other communications given by the Procuring Entity or the Engineer to the Contractor under the Contract shall be given to the Road Manager or, in its absence, its deputy, except as herein otherwise provided.

16.2.4 The Contractor shall not revoke the appointment of the Road Manager without the Procuring Entity's prior written consent, which shall not be unreasonably withheld. If the Procuring Entity consents thereto, the Contractor shall appoint some other person as the Road Manager, pursuant to the procedure set out in Sub- Clause 16.2.1.

16.2.4 The Road Manager may, subject to the approval of the Procuring Entity (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice to the Engineer signed by the Road Manager, and shall specify the powers, functions and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until a copy thereof has been delivered to the Engineer.

16.2.5 Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this Sub-Clause 16.2.3 shall be deemed to be an act or exercise by the Road Manager.

16.2.5 From the Start Date until Completion, the Road Manager shall supervise all work and services done at the Site by the Contractor and shall be present at the Site throughout normal working hours except when on leave, sick or absent for reasons connected with the proper performance of the Contract. Whenever the Road Manager is absent from the Site, a suitable person shall be appointed to act as his or her deputy.

16.2.6 The Procuring Entity may by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the Procuring Entity, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under the Specifications. The Procuring Entity shall provide evidence of the same, whereupon the Contractor shall remove such person from the Site.

16.2.7 If any representative or person employed by the Contractor is removed in accordance with Sub-Clause 16.2.5, the Contractor shall, where required, promptly appoint a replacement.

17 Work Program

17.1 Contractor's Organization

The Contractor shall supply to the Engineer a chart showing the proposed organization to be established by the Contractor for carrying out the Works and Services. The chart shall include the identities of the key personnel together with the curricula vitae of such key personnel to be employed as included in the Contractor's Tender. The Contractor shall promptly inform the Engineer in writing of any revision or alteration of such an organization chart.

17.2 Program of Performance

Not later than the Start Date, the Contractor shall prepare and supply to the Engineer a program of performance of the Contract, made in the form specified in the Specifications and showing the sequence in which it proposes to design and carry out the Works and Services, as well as the date by which the Contractor reasonably requires that the Procuring Entity shall have fulfilled its obligations under the Contract so as to enable the Contractor to execute the Contract in accordance with the program and to achieve Completion in accordance with the Contract. The Contractor shall update and revise the program as and when appropriate, but without modification in the Times for Completion given in the **PC** and any extension granted in accordance with Clause 64, and shall supply all such revisions to the Engineer.

17.3 Progress Report

The Contractor shall monitor progress of all the activities specified in the program referred to in Sub-Clause 17.2 above, and supply a progress report to the Engineer every month together with his Monthly Statement. The progress report shall be in a form acceptable to the Engineer in accordance with the Specifications.

17.4 Progress of Execution

If at any time the Contractor's actual progress falls behind the program referred to in Sub-Clause 17.2, or it becomes apparent that it will so fall behind, the Contractor shall prepare and supply to the Engineer a revised program, taking into account the prevailing circumstances, and shall notify the Engineer of the steps being taken to expedite progress so as to attain Completion of the Works and Execution of Services activities within the Time for Completion under Sub-Clause 10.2, any extension thereof entitled under Sub-Clause 64, or any extended period as may otherwise be agreed upon between the Procuring Entity and the Contractor.

17.5 Work Procedures

The Contract shall be executed in accordance with the Contract Documents and the procedures given in the Specifications.

18 Execution of Works

18.1 Setting Out/Supervision/Labor

18.1.1 Bench Mark. The Contractor shall be responsible for the true and proper setting-out of the Works in relation to benchmarks, reference marks and lines provided to it in writing by or on behalf of the Procuring Entity.

If, at any time during the progress of execution of the Works, any error shall appear in the position, level or alignment of the Works, the Contractor shall forthwith notify the Engineer of such error and, at its own expense, immediately rectify such error to the reasonable satisfaction of the Engineer. If such error is based on incorrect data provided in writing by or on behalf of the Procuring Entity, the expense of rectifying the same shall be borne by the Procuring Entity.

- 18.1.2 Contractor's Supervision. The Contractor shall give or provide all necessary supervision during the execution of the Works, and the Road Manager or its deputy shall be on the Site to provide full-time supervision of the execution. The Contractor shall provide and employ only technical personnel who are skilled and experienced in the respective callings and supervisory staff who are competent to adequately supervise the work at hand.

18.2 Contractor's Equipment

- 18.2.1 All Contractor's Equipment brought by the Contractor on to the Site shall be deemed to be intended to be used exclusively for the execution of the Contract. The Contractor shall not remove the same from the Site without informing the Engineer.
- 18.2.2 Unless otherwise specified in the Contract, upon completion of the Works and Services, the Contractor shall remove from the Site all Equipment brought by the Contractor onto the Site and any surplus materials remaining thereon.
- 18.2.3 The Procuring Entity will, if requested, use its best endeavors to assist the Contractor in obtaining any local, state or national government permission required by the Contractor for the export of the Contractor's Equipment imported by the Contractor for use in the execution of the Contract that is no longer required for the execution of the Contract.

18.3 Site Regulations and Safety

The Procuring Entity and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Procuring Entity, with a copy to the Engineer, proposed Site regulations for the Procuring Entity's approval, which approval shall not be unreasonably withheld. Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety, traffic control, accident response, gate control, sanitation, medical care, and fire prevention.

18.4 Access to site for Other Contractors

- 18.4.1 The Contractor shall, upon written request from the Procuring Entity or the Engineer, give site access to other contractors employed by the Procuring Entity on or near the site.

18.5 Site Clearance

- 18.5.1 Site Clearance in Course of Execution: In the course of carrying out the Contract, the Contractor shall keep the Site reasonably free from all unnecessary obstruction, store or remove any surplus materials, clear away any wreckage, rubbish or temporary works from the Site, and remove any Contractor's Equipment no longer required for execution of the Contract.
- 18.5.2 Clearance of Site after Completion: After Completion of all parts of the Works and Services, the Contractor shall clear away and remove all wreckage, rubbish and debris of any kind from the Site, and shall leave the Site and the Road clean and safe.

18.6 Watching and Lighting

- 8.20.1 The Contractor shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper execution and the protection of the Works and Services, for the protection of his own installations and his equipment, for the safety of the owners and occupiers of adjacent property and for the safety of the public.

18.7 Access to the Site

The Contractor shall allow the Engineer and any person authorized by the Engineer 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.

18.8 Management Meetings

- 18.8.1 Either the Engineer 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 by either the Contractor or the Procuring Entity.

- 18.8.2 The Engineer 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 Engineer either during or after the management meeting and stated in writing to all who attended the meeting.

19 Staff and Labor

19.1 Engagement of Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing.

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within the Country.

19.2 Rates of Wages and Conditions of Labor

- 19.2.1 The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by Procuring Entity's whose trade or industry is similar to that of the Contractor.
- 19.2.2 The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in Kenya in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of Kenya for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

19.3 Persons in the Service of Procuring Entity

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

19.4 Labor Laws

- 19.4.1 The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.
- 19.4.2 The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

19.5 Working Hours

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

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

19.6 Facilities for Staff and Labor

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

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

19.7 Health and Safety

- 19.7.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Procuring Entity's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- 19.7.2 The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- 19.7.3 The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.
- 19.7.4 HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

19.8 Contractor's Superintendence

- 19.8.1 Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.
- 19.8.2 Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

19.9 Contractor's Personnel

- 19.9.1 The Contractor's Personnel specified in the SCC shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:
- a Persists in any misconduct or lack of care,
 - b Carries out duties incompetently or negligently,
 - c Fails to conform with any provisions of the Contract,
 - d Persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
 - e Based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works.
- 19.9.2 If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

19.10 Records of Contractor's Personnel and Equipment

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

19.11 Disorderly Conduct

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

19.12 Foreign Personnel

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

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

19.13 Supply of Foodstuffs

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

19.14 Supply of Water

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

19.15 Measures against Insect and Pest Nuisance

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

19.16 Alcoholic Liquor or Drugs

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

19.17 Arms and Ammunition

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

19.18 Festivals and Religious Customs

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

19.19 Funeral Arrangements

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

19.20 Prohibition of Forced or Compulsory Labor

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

19.21 Prohibition of Harmful Child Labor

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labor laws of the Country have provisions for

Employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

19.22 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labor at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 19.10 [Records of Contractor's Personnel and Equipment].

19.23 Workers' Organizations

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

19.24 Non-Discrimination and Equal Opportunity

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

20 Test and Inspection

- 20.1 The Contractor shall at its own expense carry out on the Site all such tests and/or inspections as are specified in the Specifications, and in accordance with the procedures described in the Specifications.
- 20.2 The Procuring Entity and the Engineer or their designated representatives shall be entitled to attend the aforesaid test and/or inspection.
- 20.3 For tests to be carried out on the initiative of the Contractor, whenever the Contractor is ready to carry out any such test and/or inspection, he shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the Engineer. The Contractor shall provide the Engineer with a signed report of the results of any such test and/or inspection.
- 20.4 If the Procuring Entity or Engineer (or their designated representatives) fails to attend a scheduled test and/or inspection, or if it is agreed between the parties that such persons shall not attend, then the Contractor may proceed with the test and/or inspection in the absence of such persons, and may provide the Engineer with a signed report of the results thereof.
- 20.5 The Engineer may require the Contractor to carry out any test and/or inspection not required by the Contract, provided that the Contractor's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of the works and/or the Contractor's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Completion and the other obligations so affected.
- 20.6 If Rehabilitation Works, Improvement Works or Emergency Works fail to pass any test and/or inspection, the Contractor shall either rectify or replace such works and shall repeat the test and/or inspection upon giving a notice under Sub-Clause 20.3.
- 20.7 If any dispute or difference of opinion shall arise between the parties in connection with or arising out of the test and/or inspection of the Works and Services, or part of them, that cannot be settled between the parties within a reasonable period of time, it may be referred to the Arbitration for determination in accordance with Sub-Clause 6.1.
- 20.8 The Contractor agrees that neither the execution of a test and/or inspection of the Works and Services or any part of them, nor the attendance by the Procuring Entity or the Engineer, nor the issue of any test certificate pursuant to Sub-Clause 20.4, shall release the Contractor from any other responsibilities under the Contract.

- 20.9 No part or foundations shall be covered up on the Site without the Contractor carrying out any test and/or inspection required under the Contract. The Contractor shall give a reasonable notice to the Engineer whenever any such part or foundations are ready or about to be ready for test and/or inspection; such test and/or inspection and notice thereof shall be subject to the requirements of the Contract.
- 20.10 The Contractor shall uncover any part of the Works or foundations, or shall make openings in or through the same as the Engineer may from time to time require at the Site, and shall reinstate and make good such part or parts.
- 20.11 If any parts of the Works or foundations have been covered up at the Site after compliance with the requirement of Sub-Clause 20.9 and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating, and making good the same shall be borne by the Procuring Entity, and the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been delayed or impeded in the performance of any of its obligations under the Contract.

21 Rehabilitation Works

If so indicated in the **PC**, specific Rehabilitation Works shall be carried out explicitly in accordance with the Specifications and as specified in the tendering document and in the Contractor's Tender. Input quantities for Rehabilitation Works were estimated by the Contractor to achieve the performance criteria for Rehabilitation Works given in the Specifications. The specific Rehabilitation Works were offered by the Contractor at a Lump-Sum price.

22 Improvement Works

- 22.1 If so indicated in the **PC**, Improvement Works are required and will consist of a set of interventions that add new characteristics to the roads in response to new traffic and safety or other conditions. Improvement Works quantities were offered at unit prices included in the Bill of Quantities.
- 22.2 The execution of Improvement Works shall be requested by the Engineer, who will issue a Work Order defining the requested works to be carried out by the Contractor, based on the activities priced in the Bill of Quantities. The Work order shall specify the activities to be carried out and the corresponding price. The Road Manager shall confirm his acceptance by signing the Work Order.

23 Maintenance Services

Maintenance Services are those activities necessary for keeping the Road in compliance with the Performance Standard's pursuant to Clause 24. Maintenance Services shall include all activities required to achieve and keep the Road Performance Standard's and Service Levels. These Services will be remunerated by Lump-Sum amount for the period of the contract paid in fixed monthly payments during the entire Contract period.

24 Performance Standards

The Contractor shall carry out the Maintenance Services to achieve and keep the Road complying with the Service Levels defined in the Specifications. He will carry out all Works in accordance with the performance standards indicated in the Specifications.

25 Contractor's Self-Control of Quality and Safety

- 25.1 The Contractor shall, throughout the execution and completion of the Works and Services, maintain a System which shall ensure that the work methods and procedures are adequate and safe at all times and do not pose any avoidable risks and dangers to the health, safety and property of the workers and agents employed by him or any of his subcontractors, of road users, of persons living in the vicinity of the roads under contract, and any other person who happens to be on or along the roads under contract.
- 25.2 Unless specified otherwise in the **PC**, the Contractor shall establish, within his own organizational structure, a specific Unit staffed with qualified personnel, whose task is to verify continuously the degree of compliance by the Contractor with the required Service Levels. That Unit will also be responsible for the generation and presentation of the information needed by the contractor for the documentation required as defined in the Specifications. The Unit will be responsible for maintaining a detailed and complete knowledge of the condition of the Road and to provide to the Road Manager all the information needed in order to efficiently manage and maintain the Road. The Unit shall also carry out, in close collaboration with the Engineer, the verifications on the Service Levels.

- 25.3 The Contractor's Self-Control Unit mentioned in Sub-Clause 25.2 shall report the level of compliance with the required Service Levels in the standard format presented in the Specifications.

26 Environmental and Safety Requirements

- 26.1 The Contractor shall, throughout the design, execution and completion of the Works and Services, and the remedying of any defects therein:
- a) Have full regard for the safety of all persons employed by him and his subcontractors and keep the Site (so far as the same is under his control) in an orderly state appropriate to the avoidance of danger to such persons;
 - b) Provide and maintain at his own cost all guardrails, fencing, warning signs and watching, when and where necessary or required by Sub-Clause 18.3 of the Contractor by any duly constituted authority, for the protection of the Works and Services or for the safety and convenience of his workers and road users, the public or others; and
 - c) Take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

27 Work Orders for Improvement Works and Emergency Works

Improvement Works and Emergency Works shall be executed by the Contractor on the basis of Work Orders issued by the Engineer.

- 27.1 Work Orders shall be issued in writing and shall include the date on which the Work Order was issued and the signature of the Engineer. Two copies of the Work Order shall be transmitted by the Engineer to the Contractor, who shall immediately countersign one copy, including the date of acceptance, and return it to the Engineer.
- 27.2 If the Contractor has any objection to a Work Order, the Road Manager shall notify the Engineer of his reasons for such objection within ten (10) days of the date of issuing the Work Order. Within five (5) days of the Road Manager's objection, the Engineer shall cancel, modify or confirm the Work Order in writing.

28 Taking Over Procedures

- 28.1 When the whole of the Works and Services have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Taking-Over Certificate in respect of the Works and Services. The Engineer shall, within twenty-one (21) days of the date of delivery of such notice, either issue to the Contractor a Taking-Over Certificate, stating the date on which the Works and Services were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the conditions to be complied with and all the work which is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works and Services affecting substantial completion that may appear after such instructions and before completion of Taking-Over Certificate within twenty-one (21) days of completion, to the satisfaction of the Engineer, of the Works and Services so specified and remedying any defects so notified.
- 28.2 Similarly, in accordance with the procedure set out in Sub-Clause 28.1, the Contractor may request and the Engineer shall issue a Taking-Over Certificate in respect of:
- a) Any Section in respect of which a separate Time for Completion is provided in the contract,
 - b) Any substantial part of the Works and Services which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by the Procuring Entity, or
 - c) Any part of the Works and Services which the Procuring Entity has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract has not been agreed by the Contractor as a temporary measure).

29 Emergency Works

- 29.1 The need for execution of Emergency Works is jointly identified by the Procuring Entity and the Contractor and the starting of the execution of Emergency Works shall always require a Work Order issued by the Engineer.
- 29.2 The execution of Emergency Works shall be requested by the Contractor based on losses or damages occurred as a result of natural phenomena (such as strong storms, flooding or earthquakes) with imponderable consequences, or on the possibility of damages or losses occurring, or the safety of individuals, works, services or equipment being at risk as result of the natural phenomena. In order to characterize the Emergency Works, the Contractor shall forward a Technical Report to the Engineer requesting the execution of Emergency Works and characterizing the situation. On the basis of the said report, and of his own judgment of the situation, the Engineer may issue a Work Order to the Contractor.
- 29.3 The Procuring Entity or even Government authorities may declare an Emergency Situation on the basis of local legislation. In those cases, the Engineer may issue a Work Order for Emergency Works to the Contractor even without a request by the Contractor.
- 29.4 If the Contractor is unable or unwilling to do such work immediately, the Procuring Entity may do or cause such work to be done as the Procuring Entity may determine necessary in order to prevent damage to the Road. In such event the Procuring Entity shall, as soon as practicable after the occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefore. If the work done or caused to be done by the Procuring Entity is work that the Contractor was liable to do at its own expense under the Contract, the reasonable costs incurred by the Procuring Entity in connection therewith shall be paid by the Contractor to the Procuring Entity. Otherwise, the cost of such remedial work shall be borne by the Procuring Entity.

30 Quality of materials used by Contractor

- 30.1 The quality of materials used by the Contractor for the execution of the Contract shall be in compliance with the requirements of the Specifications. If the Contractor is of the opinion that materials of higher quality than those stated in the Specifications need to be used in order to ensure compliance with the Contract, he shall use such better materials, without being entitled to higher prices or remunerations.
- 30.2 Under no circumstances may the Contractor make any claim based on the insufficient quality of materials used by him, even if the material used was authorized by the Engineer.
- 20.3 The Contractor shall carry out at his own cost the laboratory and other tests that he needs to verify if materials to be used comply with the Specifications, and shall keep records of such tests. If requested by the Engineer, the Contractor shall handover the results of the tests.

31 Signaling and demarcation of work zones and by passes

- 31.1 To ensure the safety of road users, including non-motorized road users and pedestrians, the Contractor is responsible to install and maintain at his cost the adequate signaling and demarcation of worksites, which in addition must comply with the applicable legislation.
- 31.2 If the execution of services and works under the contract is likely to interfere with traffic, the Contractor shall take at his cost the measures necessary to limit such interference to the strict minimum, or any danger to the workers or others. For that purpose, he is entitled to install, within the right-of-way of the road, temporary by passes, structures or other modifications to be used by traffic during the execution of works and services. The Contractor shall notify the Engineer of any such temporary installations.
- 31.3 If the execution of Works and Services by the Contractor makes it necessary to temporarily close a road section, and a traffic detour has to be implemented over other public roads or streets, the Contractor shall be responsible for the adequate signaling of the detour, under the same conditions as stated in Sub-Clause 31.1.
- 31.4 The Contractor shall inform the local authorities and the local police about such activities to be carried out by him which may cause any significant interruptions or changes to the normal traffic patterns. Such information shall be made in writing and at least seven (7) days before the beginning of such activities. Upon request from the Contractor, the Procuring Entity shall assist the Contractor in the coordination with the local authorities and the local police.

D. ALLOCATION OF RISKS

32 Procuring Entity's Risks

32.1 From the Start Date until the Defects Correction Certificate has been issued, the following are Procuring Entity's risks in so far as they directly affect the execution of the Works and Services included in this Contract:

- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies;
- b) rebellion, revolution, insurrection, military or usurped power, or civil war;
- c) ionizing radiations, contamination by radio activity from any nuclear fuel, or any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
- d) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works and Services;
- e) loss or damage due to the use or occupation by the Procuring Entity of any unfinished Section or part of the Works, except as may be provided for in the Contract;
- f) Any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions.

33 Contractor's Risks

33.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the remaining risks are the Contractor's risks. The Risks are indicated in the **PC**.

34 Loss of or Damage to Property; Accident or Injury to Workers; Indemnification

34.1 Subject to Sub-Clause 34.3, the Contractor shall indemnify and hold harmless the Procuring Entity and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property arising in connection with the execution and by reason of the negligence of the Contractor or its Subcontractors, or their employees, officers or agents, except any injury, death or property damage caused by the negligence of the Procuring Entity, its contractors, employees, officers or agents.

34.2 If any proceedings are brought or any claim is made against the Procuring Entity that might subject the Contractor to liability under Sub-Clause 34.1, the Procuring Entity shall promptly give the Contractor a notice thereof and the Contractor may at its own expense and in the Procuring Entity's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

34.3 If the Contractor fails to notify the Procuring Entity within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Procuring Entity shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the Procuring Entity within the twenty-eight (28) day period, the Procuring Entity shall make no admission that may be prejudicial to the defense of any such proceedings or claim. The Procuring Entity shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.

34.4 The Procuring Entity shall indemnify and hold harmless the Contractor and its employees, officers and Subcontractors from any liability for loss of or damage to property of the Procuring Entity, other than the Works not yet taken over, that is caused by fire, explosion or any other perils, in excess of the amount recoverable from insurances procured under Clause 35, provided that such fire, explosion or other perils were not caused by any actor failure of the Contractor.

34.5 The party entitled to the benefit of an indemnity under this Clause 34 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.

35 Insurance

35.1 To the extent specified in the **PC**, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the

sums and with the deductibles and other conditions specified in the said **PC**. The identity of the insurers and the form of the policies shall be subject to the approval of the Procuring Entity, who should not unreasonably withhold such approval.

- a) Loss of or damage to the Plant and Materials-Covering loss or damage occurring prior to Completion.
- b) Third Party Liability Insurance-Covering bodily injury or death suffered by third parties (including the Procuring Entity's personnel) and loss of or damage to property occurring in connection with Works and Services.
- c) Automobile Liability Insurance - Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.
- d) Workers' Compensation-In accordance with the statutory requirements applicable in any country where the Contractor any part thereof is executed.
- e) Procuring Entity's Liability - In accordance with the statutory requirements applicable in any country where the Contractor any part thereof is executed.
- f) Other Insurances – Such other insurances as may be specifically agreed upon by the parties.

35.2 The Procuring Entity shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to Sub-Clause 35.1, except for the Third Party Liability, Workers' Compensation and Procuring Entity's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to Sub-Clause 35.1 except for the Cargo Insurance During Transport, Workers' Compensation and Procuring Entity's Liability Insurances. All insurer's rights of subrogation against such co-insured for losses or claims arising out of the performance of the Contract shall be waived under such policies.

35.3 The Contractor shall deliver to the Procuring Entity certificates of insurance (or copies of the insurance policies) as evidence that the required policies are in full force and effect. The certificates shall provide that no less than twenty-one (21) days' notice shall be given to the Procuring Entity by insurers prior to cancellation or material modification of a policy.

35.4 The Contractor shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.

35.5 If the Contractor fails to take out and/or maintain in effect the insurances referred to in Sub-Clause 35.1, the Procuring Entity may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Contract or under the Contract any premium that the Procuring Entity shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Contractor.

35.6 Unless otherwise provided in the Contract, the Contractor shall prepare and conduct all and any claims made under the policies effected by it pursuant to this Clause 35, and all monies payable by any insurers shall be paid to the Contractor. The Procuring Entity shall give to the Contractor all such reasonable assistance as maybe required by the Contractor. With respect to insurance claims in which the Procuring Entity's interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of the Procuring Entity. With respect to insurance claims in which the Contractor's interest is involved, the Procuring Entity shall not give any release or make any compromise with the insurer without the prior written consent of the Contractor.

36 Unforeseen Conditions

36.1 If, during the execution of the Contract, the Contractor shall encounter on the Site any physical conditions (other than climatic conditions) or artificial obstructions that could not have been reasonably foreseen prior to the date of the Contract Agreement by an experienced contract or on the basis of reasonable examination of the data relating to the Road (including any data and tests provided by the Procuring Entity), and on the basis of information that it could have obtained from a visual inspection of the Site or other data readily available to it relating to the Road, and if the Contractor determines that it will in consequence of such conditions or obstructions incur additional cost and expense or require additional time to perform its obligations under the Contract that would not have been required if such physical conditions or artificial obstructions had not been encountered, the Contractor shall promptly, and before performing additional work or using additional Plant and Equipment or Contractor's Equipment, notify the Engineer in writing of:-

- a) The physical conditions or artificial obstructions on the Site that could not have been reasonably foreseen;
- b) The additional work and/or Plant and Equipment and/or Contractor's Equipment required, including the steps which the Contractor will or proposes to take to overcome such conditions or obstructions;
- c) The extent of the anticipated delay;
- d) The additional cost and expense that the Contractor is likely to incur.

- 36.2 On receiving any notice from the Contractor under this Sub-Clause 36.1, the Engineer decide upon the actions to be taken to overcome the physical conditions or artificial obstructions encountered. Following such consultations, the Engineer shall instruct the Contractor, with a copy to the Procuring Entity, of the actions to be taken.
- 36.3 Any reasonable additional cost and expense incurred by the Contractor in following the instructions from the Engineer to overcome such physical conditions or artificial obstructions referred to in Sub-Clause 36.1 shall be paid by the Procuring Entity to the Contractor as an addition to the Contract Price.
- 36.4 If the Contractor is delayed or impeded in the performance of the Contract because of any such physical conditions or artificial obstructions referred to in Sub-Clause 36.1, the Time for Completion shall be extended in accordance with Clause 64.

37 Change in Laws and Regulations

If, after the date twenty-eight (28) days prior to the date of Tender submission, where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the **PC**.

38 Force Majeure

- 38.1 “Force Majeure” shall mean any event beyond the reasonable control of the Procuring Entity or of the Contractor, as the case may be, in so far as they directly affect the execution of the Services and Works included in this Contract and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following: -
- a) war, hostilities or war like operations (whether a state of war be declared or not), invasion, act of foreign enemy and civil war;
 - b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts;
 - c) confiscation, nationalization, mobilization, commandeering, requisition by or under the order of any government or de jure or de facto authority or ruler or any other actor failure to act of any local state or national government authority;
 - d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague;
 - e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster;
 - f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure.
- 38.2 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.
- 38.3 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with Clause 64.
- 38.4 The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under Sub-Clause 38.6.
- 38.5 No delay or nonperformance by either party hereto caused by the occurrence of any event of Force Majeure shall:
- a) Constitute a default or breach of the Contract; and
 - b) Give rise to any claim for damages or additional cost or expense occasioned thereby;

If and to the extent that such delay or nonperformance is caused by the occurrence of an event of Force Majeure.

- 38.6 If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other, but without prejudice to either party's right to terminate the Contract under Clause 59.
- 38.7 In the event of termination pursuant to Sub-Clause 38.6, the rights and obligations of the Procuring Entity and the Contractor shall be as specified in Sub-Clauses 59.1.2 and 59.1.3.
- 38.8 Notwithstanding Sub-Clause 38.5, Force Majeure shall not apply to any obligation of the Procuring Entity to make payments to the Contractor herein.

E. GUARANTEES AND LIABILITIES

39 Completion Time Guarantee and Liability

- 39.1 The Contractor guarantees that it shall attain specified Service Levels and the Completion of Rehabilitation and Improvement Works (or a part for which a separate time for completion is specified in the **PC**) within the time schedules specified in the **PC** and the Specifications, pursuant to Sub-Clause 10.2, or within such extended time to which the Contractor shall be entitled under Clause 64 hereof.
- 39.2 If the Contractor fails to attain specified Service Levels within the contractually agreed time schedules as given in the Specifications, the contractor shall receive reduced payments for Maintenance Services, for such default and not as a penalty, in accordance with the Specifications.
- 39.3 If the Contractor fails to attain the Completion of Rehabilitation and Improvement Works (or a part for which a separate time for completion is specified in the **PC** clause 39.1) within the contractually required time schedules, the contractor shall pay to the Procuring Entity liquidated damages for such default and not as a penalty, in accordance with the **PC** and the Specifications.
- 39.4 The payment reductions and liquidated damages indicated in Clause 51 and 39.3 shall be the only monies due from the Contractor for such defaults, and they will be applied for every day of delay, in accordance with the **PC** and the Specifications. The aggregate amount of such liquidated damages and payment reductions shall in no event exceed the "aggregate liability" in accordance with Clause
- 39.5 The payment or deduction of such sums shall not relieve the Contractor from his obligation to complete the Works and Services, or from any other of his obligations and liabilities under the Contract.

40 Performance Guarantee and Liability

- 40.1 The Contractor guarantees that during the Performance Tests or Inspections for Rehabilitation and Improvement Works, and for Emergency Works, the Road and all parts thereof shall attain the Performance Standard's specified in the corresponding Specifications.
- 40.2 If, for reasons attributable to the Contractor, the minimum level of the Performance Standard's specified in the corresponding Specifications are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications and/or additions to the Road or any part thereof as may be necessary to meet at least the minimum level of such Standard's. The Contractor shall notify the Procuring Entity upon completion of the necessary changes, modifications and/or additions, and shall request the Procuring Entity to repeat the Test or Inspection until the minimum level of the Standard's has been met. If the Contractor eventually fails to meet the minimum level of Performance Standard, the Procuring Entity may consider termination of the Contract, pursuant to Sub-Clause 59.2.2.
- 40.3 If, for reasons attributable to the Contractor, the Performance Standard's relating to Rehabilitation and Improvement Works specified in the corresponding Specifications are not attained either in whole or in part, the Contractor shall, at the Contractor's choice, either
- Make such changes, modifications and/or additions to the Works and Services or any part thereof that are necessary to attain the Performance Standard's at its cost and expense, and shall request the Procuring Entity to repeat the Test, or
 - Pay liquidated damages to the Procuring Entity in respect of the Works and Services which fail to meet the

Performance Standard's in accordance with the provisions in the corresponding Specifications.

- 40.4 The payment of liquidated damages under Sub-Clause 40.3, up to the limitation of liability specified in the **PC**, shall completely satisfy the Contractor's guarantees under Sub-Clause 40.1, and the Contractor shall have no further liability whatsoever to the Procuring Entity in respect thereof. Upon the payment of such liquidated damages by the Contractor, the Engineer shall issue the Certificate of Completion for the Works or any part thereof in respect of which the liquidated damages have been so paid.

41 Defect Liability

- 41.1 The Contractor warrants that the Works and Services or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Works and Services executed.
- 41.2 The Defect Liability Period shall be twelve (12) months from the date of Completion of the Contract, or eighteen (18) months from the date of Certificate of Completion of the Works (or any part thereof), whichever occurs first, unless specified otherwise in the **PC**. If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Works and Services executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Procuring Entity regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Road caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defector of any damage to the Road arising out of or resulting from improper operation or maintenance of the Road by the Procuring Entity after taking over.
- 41.3 The Contractor's obligations under this Clause 41 shall not apply to: -
- a) Any works or materials that have a normal life shorter than the Defect Liability Period stated herein;
 - b) Any designs, specifications or other data designed, supplied or specified by or on behalf of the Procuring Entity or any matters for which the Contractor has disclaimed responsibility herein;
 - c) Any other materials supplied or any other work executed by or on behalf of the Procuring Entity, except for the work executed by the Procuring Entity under Sub-Clause 41.6.
- 41.4 The Procuring Entity shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Procuring Entity shall afford all reasonable opportunity for the Contractor to inspect any such defect.
- 41.5 The Procuring Entity shall afford the Contractor all necessary access to the Site to enable the Contractor to perform its obligations under this Clause 41. The Contractor may remove from the Site any Plant and Equipment that are defective if the nature of the defect is such that repairs cannot be expeditiously carried out at the Site.
- 41.6 If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Road caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Procuring Entity may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the Procuring Entity in connection therewith shall be paid to the Procuring Entity by the Contractor or may be deducted by the Procuring Entity from any monies due the Contractor or claimed under the Performance Security.
- 41.7 If the Road or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Road or such part, as the case may be, shall be extended by a period equal to the period during which the Road or such part cannot be used because of any of the aforesaid reasons.
- 41.8 Except as provided in Clauses 40 and 41, the Contractor shall be under no liability whatsoever and howsoever arising, and whether under the Contractor at law, in respect of defects in the Road or any part thereof, the Plant and Equipment, design or engineering or work executed that appear after Completion of the Works and Services, except where such defects are the result of the gross negligence, fraud, criminal or willful action of the Contractor.

42 Limitation of Liability

- 42.1 Except in cases of criminal negligence or willful misconduct,
- a) The Contractor shall not be liable to the Procuring Entity, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Procuring Entity and
 - b) the aggregate liability of the Contractor to the Procuring Entity, whether under the Contract, in tort or

otherwise, shall not exceed the limit specified in the **PC**.

43 Liability for Damages through Traffic Accidents and Traffic Interruptions

- 43.1 The Contractor cannot be held liable for losses or damages of any kind arising out of traffic accidents on the roads included in the Contract, unless those traffic accidents have been caused directly by potholes or other major defects of the Road covered by the Contract he failed to repair in a timely manner, criminal acts, willful misconduct or gross negligence of the Contractor.
- 43.2 Under no circumstances can the Contractor be held liable for losses or damages of any kind and to anyone arising out of interruptions of traffic or traffic delays on the road included in the Contract, including any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs.

F. PAYMENT

44 Contract Price

- 44.1 The Contract Price shall be as specified in the Form of Contract Agreement to be paid in the currencies indicated in the **PC**.
- 44.2 Unless indicated otherwise in the **PC**, and except in the event of a Change as provided for in the Contract, the Contract Price shall be: -
- a) For Rehabilitation Works, a firm lump sum not subject to any alteration, to be paid according to work progress;
 - b) For Maintenance Services, a firm lump sum to be paid in monthly installments;
 - c) For Improvement Works, the total price stated in the Bill of Quantities for this item;
 - d) For Emergency Works, the Provisional Sum reserved for this purpose.
- 44.3 The Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.

45 Advance Payment

- 45.1 The Procuring Entity shall make advance payment to the Contractor of the amounts and by the date stated in the **PC**, 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 will not be charged on the advance payment.
- 45.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for the 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 Engineer.
- 45.3 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 and Services on a payment basis as indicated in the **PC**.

46 Bills of Quantities

- 46.1 The Bills of Quantities shall contain items for Groups of Activities which include the provision of Services (measured by performance standards) and Works (measured by unit of outputs or of products). The Bill of Quantities for Works shall include, where applicable, the lump-sum and unit price for Rehabilitation Works, and unit rates for Improvement Works and for Emergency Works.
- 46.2 Maintenance Services shall be measured and billed separately and will be remunerated by lump-sum amount for the period of the contract, and paid in fixed monthly payments during the entire Contract period. The values for remuneration of the Maintenance Services are those stated in the Bills of Quantities.
- 46.3 Rehabilitation Works will be remunerated by Lump-Sum amount for the period of the contract, however, indicating the quantities of measurable outputs to be executed in order that the Road achieves the performance standards specified in the tendering document. Payments will be made in accordance with the execution of those measured outputs paid by executed works output. The prices shall be those stated in the Bill of Quantities.

- 46.4 Improvement Works will be remunerated after acceptance by the Procuring Entity and shall be paid according to the product unit price using the prices included in the Bill of Quantities.
- 46.5 Each Emergency Work Order issued by the Engineer will include a lump-sum price for the works to be performed. The Lump-Sum price for the Emergency Works will be submitted by the Contractor to the Engineer in each emergency pursuant to Clauses 29 and 61 and will be prepared based on the Specifications and on the unit prices included in the Bill of Quantities for Emergency Works, and will remunerate all Emergency Activities. The prices include compliance with all Performance Indices described in the Specifications. Once approved, Emergency Works will be paid as lump sum in accordance with the schedule of payment proposed by the Contractor for the specific Emergency and approved by the Procuring Entity.
- 46.6 The Bills of Quantities is used to calculate the Contract Price. The amounts for Maintenance Services and Rehabilitation Works are the Lump-Sum prices offered in the Contractor's Tender. The Improvement Works amount included in the Contract is an estimate on the basis of unit prices included in the Contractor's Tender. The Provisional Sum included in the Contract Price is an estimate for use when authorized by the Procuring Entity for Emergency Works and contingencies.

47 Measurement

- 47.1 Maintenance Services will not be measured in volume; however, its payment will be affected by compliance with the Performance Standard's pursuant to Clause 24. Maintenance Services shall be billed in fixed monthly amounts as per the Bill of Quantities Lump-Sum amount for Maintenance Services, beginning from the Start Date. Payments will be made with Reductions if the Performance Standards are not achieved, as defined in the Specifications. The Reductions for non-compliance with the Performance Standard's will be applied on a daily basis for the period under which the Road does not achieve the Performance Standard's, in accordance with the methodology specified in the Specifications.
- 47.2 Rehabilitation Works will be measured on the basis indicated in the **PC**, based on the quantity of actual work outputs as defined in the Specifications, concluded by the Contractor and approved by the Engineer. The prices shall be those stated in the Bill of Quantities.
- 47.3 Improvement Works will be measured on the basis indicated in the **PC** and in accordance with the unit of measurement used for product unit price included in the Bill of Quantities. The prices shall be those stated in the Bill of Quantities.
- 47.4 Emergency Works will not be measured and shall be billed in accordance with the Schedule of Payments agreed for each specific Emergency Work as approved by the Procuring Entity.

48 Price Adjustments

- 48.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the **PC**. If so provided, the amounts certified in each payment certificate, after 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 indicated below applies to each Contract currency:

$P_c = A_c + B_c I_{mc} / I_{oc}$ where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c"

A_c and B_c are coefficients¹ specified in the **PC**, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "c", and I_{mc} is the index prevailing at the end of the month being invoiced and I_{oc} is the index prevailing twenty-eight (28) days before Tender opening for inputs payable; both in the specific currency "c".

- 48.2 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.

¹The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients will be the same in the formulae for all currencies, since coefficient A_c , 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 is added to the Contract Price.

49 Monthly Statements and Payments

- 49.1 The Contractor shall submit to the Engineer monthly statements in the format indicated in the Specifications, of the estimated value of Maintenance Services, Rehabilitation Works, Improvement Works, and Emergency Works in separated items covering the Works and Services for the corresponding month.
- 49.2 The Engineer shall check the Contractor's monthly statement and certify within fourteen (14) days the amount to be paid to the Contractor.
- 49.3 The value of Services executed shall be certified by the Engineer considering the monthly amount included in the Bill of Quantities for Maintenance Services and the achievement of the Performance Standard's for the Maintenance Services adjusted for any payment reductions in accordance with Sub-Clause 51.1.
- 49.4 The value of Works executed shall be certified by the Engineer considering the value of the quantities of products executed and the prices in the Bill of Quantities.
- 49.5 The Engineer 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.

50 Payments

- 50.1 Payments shall be adjusted for deductions for advance payments, retention, and reductions for not achieving Performance Standard's for Maintenance Services. The Procuring Entity shall pay the Contractor the amounts certified by the Engineer in accordance with Clause 49, within twenty-eight (28) 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.
- 50.2 If an amount certified is increased in a later certificate or because 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. The interest rate shall be determined as per Sub-Clause 50.1.
- 50.3 Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
- 50.4 Items of the Works for which no rate or price has been entered in the Bill of Quantities will not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.
- 50.5 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

51 Retention and Reductions

- 51.1 The Procuring Entity shall retain the percentage indicated in the **PC** from each payment due to the Contractor for Rehabilitation Works and Improvement Works, except for the types of works specified in the **PC**. The regular monthly lump-sum payments for performance-based Maintenance Services will not be subject to retentions, unless indicated in the **PC**.
- 51.2 52.2 On completion of the Rehabilitation and Improvement Works, half the total amount retained shall be repaid to the Contractor and the other half after twelve (12) months have passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor have been corrected before the end of this period.
- 51.3 On completion of the whole Works and Services, the Contractor may substitute retention money with an “on demand” Bank guarantee.

51.4 Reduction of monthly payments for Maintenance Services due to noncompliance with the Service Levels will be made as indicated in Sub-Clause 47.1. The amount of Reduction for the days in which the Road was not complying with the Performance Standard's will not be paid or repaid, even after the Contractor re-establishes the quality levels to the standard's required by the contract.

52 Taxes and Duties

52.1 Issuance of Securities

52.2 The Contractor shall provide the securities specified below in favour of the Procuring Entity at the times, and in the amount, manner and form specified below.

53 Advance Payment Security

53.1 The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the corresponding **PC** to the Contract Agreement, and in the same currency or currencies.

53.2 The security shall be in the form provided in the tendering document or in another form acceptable to the Procuring Entity. The amount of the security shall be reduced in proportion to the value of the Works and Services executed by and paid to the Contractor from time to time, and shall automatically become null and void when the full amount of the advance payment has been recovered by the Procuring Entity. The security shall be returned to the Contractor immediately after its expiration.

54 Performance Security

54.1 The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the **PC**.

54.2 The security shall be denominated in the currency or currencies of the Contract, or in a freely convertible currency acceptable to the Procuring Entity, and shall be in one of the forms of guarantees provided in the tendering document, as stipulated by the Procuring Entity in the **PC**, or in another form acceptable to the Procuring Entity.

54.3 The security shall automatically become null and void, twelve (12) months after Completion of all Works and Services under the Contract, provided however, that if the Defects Liability Period has been extended on any part of the Works pursuant to Sub-Clause 41.8 hereof, the Contractor shall issue an additional security in an amount proportionate to the Contract Price of that part. The security shall be returned to the Contractor immediately after its expiration.

55 Certificate of Completion

The Contractor shall request the Engineer to issue a Certificate of Completion of the Rehabilitation Works, Improvement Works and Emergency Works, or parts thereof, as applicable, and the Engineer will do so upon deciding that the work is completed.

56 Final Statement

56.1 The Contractor shall supply the Engineer 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 Engineer shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within fifty-six (56) days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within fifty-six (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 Engineer shall decide on the amount payable to the Contractor and issue a payment certificate.

Discharge

56.2 Upon submission of the Final Statement, the Contractor shall give to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 55 has been made and the performance security referred to in Sub-Clause 53.3, if any, has been returned to the Contractor.

57 As Built Drawings and Manuals

- 57.1 If “as built” Drawings and/or manuals are required; the Contractor shall supply them by the dates stated in the **PC**.
- 57.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **PC**, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the **PC** from payments due to the Contractor.

G. REMEDIES

58 Suspension

- 58.1 The Procuring Entity may request the Engineer, by notice to the Contractor, to order the Contractor to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons therefore. The Contractor shall thereupon suspend performance of such obligation (except those obligations necessary for the care or preservation of the Site and Works) until ordered in writing to resume such performance by the Engineer.
- 58.2 If, by virtue of a suspension order given by the Engineer, other than by reason of the Contractor's default or breach of the Contract, the Contractor's performance of any of its obligations is suspended for an aggregate period of more than ninety (90) days, then at any time thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the Engineer requiring that the Procuring Entity shall, within twenty-eight (28) days of receipt of the notice, order the resumption of such performance or request and subsequently order a change in accordance with Sub-Clause 63.1, excluding the performance of the suspended obligations from the Contract.
- 58.3 If the Procuring Entity fails to do so within such period, the Contractor may, by a further notice to the Engineer, elect to treat the suspension as termination of the Contract under Sub-Clause 59.1.

If

- a) The Procuring Entity has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Contract, or commits a substantial breach of the Contract, the Contractor may give a notice to the Procuring Entity that requires payment of such sum, with interest thereon as stipulated in Sub-Clause 50.1, requires approval of such invoice or supporting documents, or specifies the breach and requires the Procuring Entity to remedy the same, as the case may be. If the Procuring Entity fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice; or
- b) The Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Procuring Entity, including but not limited to the Procuring Entity's failure to provide possession for access to the Site, or failure to obtain any governmental permit under the Procuring Entity's responsibility and necessary for the execution and/or completion of the Works and Services, then the Contractor may by fourteen (14) days' notice to the Procuring Entity suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress.
- 58.4 If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this Clause 58, then the Time for Completion shall be extended in accordance with Sub-Clause 64, and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the Procuring Entity to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of progress by reason of the Contractor's default or breach of the Contract.
- 58.5 During the period of suspension, the Contractor shall not remove from the Site any Plant and Equipment or any Contractor's Equipment, without the prior written consent of the Procuring Entity.

59 Termination

59.1 Termination for Procuring Entity's Convenience

The Procuring Entity may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this Sub-Clause 58.1.

- 59.2 Upon receipt of the notice of termination under Sub-Clause 58.1, the Contractor shall either immediately or upon the date specified in the notice of termination.

- a cease all further work, except for such work as the Procuring Entity may specify in the notice of termination for the sole purpose of protecting that part of the Works and Services already executed, or any work required to leave the Site in a clean and safe condition,
- b terminate all subcontracts, except those to be assigned to the Procuring Entity pursuant to paragraph (d) below,
- c remove all Contractor's Equipment from the Site, repatriate the Contractor's and its Subcontractors' personnel from the Site, remove from the Site any wreckage, rubbish and debris of any kind, and leave the whole of the Site in a clean and safe condition
- d In addition, the Contractor, subject to the payment specified in Sub-Clause 58.3, shall
 - i) deliver to the Procuring Entity the parts of the Works executed by the Contractor up to the date of termination,
 - ii) to the extent legally possible, assign to the Procuring Entity all right, title and benefit of the Contractor to the Works and Services and to the Plant and Equipment as of the date of termination, and, as may be required by the Procuring Entity, in any subcontracts concluded between the Contractor and its Subcontractors
 - iii) deliver to the Procuring Entity all non-proprietary drawings, specifications and other documents prepared by the Contractor or its Subcontractors as at the date of termination in connection with the Works.

59.3 In the event of termination of the Contract under Sub-Clause 59.1, the Procuring Entity shall pay to the Contractor the following amounts:

- a. The Contract Price, properly attributable to the parts of the works and services executed by the Contractor as of the date of termination,
- b. the costs reasonably incurred by the Contractor in the removal of the Contractor's Equipment from the Site and in the repatriation of the Contractor's and its Subcontractors' personnel,
- c. any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges,
- d. the costs incurred by the Contractor in protecting and leaving the Site in a clean and safe condition pursuant to paragraph (a) of Sub-Clause 59. 2,
- e. the cost of satisfying all other obligations, commitments and claims that the Contractor may in good faith have undertaken with third parties in connection with the Contract and that are not covered by paragraphs through (d) above.

60 Termination for Contractor's Default

60.1 The Procuring Entity, without prejudice to any other rights or remedies it may possess, may terminate the Contract forth within the following circumstances by giving a notice of termination and its reasons there for to the Contractor, referring to this Sub-Clause 59.2:

- a If the Contractor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt;
- b if the Contractor assigns or transfers the Contract or any right or interest therein in violation of the provision of Clause 13;
- c if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2a of the Appendix A to the GC, in competing for or in executing the Contract

If the Contractor

- a Has abandoned or repudiated the Contract
- b has without valid reason failed to commence work on the Road promptly or has suspended (other than pursuant to Sub-Clause 58.2) the progress of Contract performance for more than twenty-eight (28) days after receiving a written instruction from the Procuring Entity to proceed,
- c persistently fails to execute the Contract in accordance with the Contract, such failure being defined in the PC, or persistently neglects otherwise to carry out its obligations under the Contract without just cause,
- d refuses or is unable to provide sufficient materials, services or labor to execute and complete the Works and Services in the manner specified in the program furnished under Clause 17 at a rate of progress that give reasonable assurance to the Procuring Entity that the Contractor can attain completion of the works and services by the Time for Completion as extended, then the Procuring Entity may, without prejudice to any other rights it may

possess under the Contract, give a notice to the Contractor stating the nature of the default and requiring the Contractor to remedy the same. If the Contractor fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Procuring Entity may terminate the Contract forth with by giving a notice of termination to the Contractor that refers to this Sub- Clause 59.2.

60.2 Upon receipt of the notice of termination under Sub-Clauses 59.2.1 or 59.2.2, the Contractor shall, either immediately or upon such date as is specified in the notice of termination,

- a cease all further work, except for such work as the Procuring Entity may specify in the notice of termination for the sole purpose of protecting that part of the Works and Services already executed, or any work required to leave the Site in a clean and safe condition
- b terminate all subcontracts, except those to be assigned to the Procuring Entity based on the Procuring Entity's written request
- c deliver to the Procuring Entity all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Works and Services.

60.3 The Contractor shall be entitled to be paid the Contract Price attributable to the Works and Services executed as of the date of termination, and the costs, if any, incurred in protecting and in leaving the Site in a clean and safe condition pursuant to paragraph (a) of Sub-Clause 59.2.3. Any sums due the Procuring Entity from the Contractor accruing prior to the date of termination shall be deducted from the amount to be paid to the Contractor under this Contract.

61 Termination by Contractor

61.1 If

- a The Procuring Entity has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to Clause 50, or commits a substantial breach of the Contract, the Contractor may give a notice to the Procuring Entity that requires payment of such sum, with interest there on as stipulated in Sub-Clause 50.2, requires approval of such invoice or supporting documents, or specifies the breach and requires the Procuring Entity to remedy the same, as the case may be. If the Procuring Entity fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice, or
- b The Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Procuring Entity, including but not limited to the Procuring Entity's failure to provide possession of or access to the Site or other areas or failure to obtain any governmental permit under the Procuring Entity's responsibility and necessary for the execution and/or completion of the Works and Services, then the Contractor may give a notice to the Procuring Entity thereof, and if the Procuring Entity has failed to pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within twenty-eight (28) days of such notice, or if the Contractor is still unable to carry out any of its obligations under the Contract for any reason attributable to the Procuring Entity within twenty-eight (28) days of the said notice, the Contractor may by a further notice to the Procuring Entity referring to this Sub-Clause 59.3.1, forth with terminate the Contract.

61.2 The Contractor may terminate the Contract forth with by giving a notice to the Procuring Entity to that effect, referring to this Sub-Clause 59.3.2, if the Procuring Entity becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Procuring Entity takes or suffers any other analogous action in consequence of debt.

61.3 If the Contract is terminated under Sub-Clauses 59.3.1 or 59.3.2, then the Contractor shall immediately

- a Cease all further work, except for such work as may be necessary for the purpose of protecting that part of the Road already executed, or any work required to leave the Site in a clean and safe condition,
- b Terminate all subcontracts, except those to be assigned to the Procuring Entity pursuant to paragraph (d) (ii),
- c Remove all Contractor's Equipment from the Site and repatriate the Contractor's and its Subcontractors' personnel from the Site.

61.4 In addition, the Contractor, subject to the payment specified in Sub-Clause 59.3.4, shall

- i) deliver to the Procuring Entity the parts of the Road executed by the Contractor up to the date of termination,

- ii) to the extent legally possible, assign to the Procuring Entity all right, title and benefit of the Contractor to the Road and to the Plant and Equipment as of the date of termination, and, as maybe required by the Procuring Entity, in any subcontracts concluded between the Contractor and its Subcontractors,
- iii) deliver to the Procuring Entity all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Works and Services.

61.5 If the Contract is terminated under Sub-Clauses 59.3.1 or 59.3.2, the Procuring Entity shall pay to the Contractor all payments specified in Sub-Clause 59.1.3, and reasonable compensation for all loss, except for loss of profit, or damage sustained by the Contractor arising out of, in connection with or in consequence of such termination.

61.6 Termination by the Contractor pursuant to Sub-Clause 59.3 is without prejudice to any other rights or remedies of the Contractor that may be exercised in lieu of or in addition to rights conferred by Sub-Clause 59.3.

61.7 In Clause 59, in calculating any monies due from the Procuring Entity to the Contractor, account shall be taken of any sum previously paid by the Procuring Entity to the Contractor under the Contract, including any advance payment paid pursuant to the Contract.

H. PROVISIONAL SUM

62 Provisional Sum

“Provisional Sum” means a sum included in the Contract for use when authorized by the Procuring Entity for Emergency Works and for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Procuring Entity. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the Engineer shall determine in accordance with this Clause.

63 Use of Provisional Sum for Emergency Works

63.1 After detecting a situation which in the opinion of the Contractor justifies the execution of Emergency Works or otherwise as defined in Clause 29, the Contractor shall submit a Technical Report to the Engineer characterizing the situation, and state estimated works quantities to correct the emergency situation, and a Lump Sum price quotation for the Emergency Works to be carried out. The price quotation should be based on the Specifications stated in Section VII using the unit prices included in the Bill of Quantities.

63.2 If the execution of the Emergency Works requires any activity not priced in the Bill of Quantities, the Contractor will use the price breakdowns included in the Contractor's Tender in order to form the unit prices of the unpriced items to be included in the Price Quotation of the Emergency Works, all in accordance with agreed methodology for approving new prices.

63.3 Upon receiving the request for Emergency Works including a Price Quotation, the Engineer may issue a Work Order in accordance with Sub-Clause 29.2 for execution of the Emergency Works for a Lump-Sum amount with a payment Schedule agreed with the Contractor. The cost of these Works will be covered by the amounts included in the Provisional Sum.

64 Use of Provisional Sum for Contingencies

The use of the Provisional Sum to cover for Contingencies will be done under the control and initiative of the Engineer in accordance with the conditions of the Contract.

I. CHANGE IN CONTRACT ELEMENTS

65 Change in Assignments to Contractor

65.1 Introducing a Change

65.1 If so indicated in the **PC**, the Procuring Entity shall have the right to propose, and subsequently require, that the Engineer order the Contractor from time to time during the performance of the Contract to make any change, modification, addition or deletion to, in or from the Assignments to the Contractor (herein after called “Change”), provided that such Change falls within the general scope of the Assignment and does not constitute, taking into account both the state of advancement of the Works and Services and the technical compatibility of the Change envisaged with the nature of the Works and Services as specified in the Contract.

65.2 If so indicated in the **PC**, the Contractor may from time to time during its performance of the Contract propose to the

Procuring Entity (with a copy to the Engineer) any Change that the Contractor considers necessary or desirable to improve the quality, efficiency or safety of the Works and Services. The Procuring Entity may at its discretion approve or reject any Change proposed by the Contractor.

65.3 Notwithstanding Sub-Clauses 63.1.1 and 63.1.2, no change made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.

65.4 The procedure on how to proceed with and execute Changes is specified in Sub-Clauses 63.2 and 63.3, further details and sample forms are provided in the Sample Forms and Procedures section in the tendering documents.

67 Changes Originating from Procuring Entity

67.1 If the Procuring Entity proposes a Change pursuant to Sub-Clause 63.1.1, it shall send to the Contractor a "Request for Change Proposal," requiring the Contractor to prepare and furnish to the Engineer, as soon as reasonably practicable, a "Change Proposal," which shall include the following:

- a) Brief description of the Change
- b) Effect on the Time for Completion
- c) Estimated cost of the Change
- d) Effect on Functional Guarantees (if any)
- e) Effect on any other provisions of the Contract

67.1 Prior to preparing and submitting the "Change Proposal," the Contractor shall submit to the Engineer an "Estimate for Change Proposal," which shall be an estimate of the cost of preparing and submitting the Change Proposal.

Upon receipt of the Contractor's Estimate for Change Proposal, the Procuring Entity shall do one of the following:

- f) Accept the Contractor's estimate with instructions to the Contractor to proceed with the preparation of the Change Proposal,
- g) Advise the Contractor of any part of its Estimate for Change Proposal that is unacceptable and request the Contractor to review its estimate,
- h) advise the Contractor that the Procuring Entity does not intend to proceed with the Change.

67.3 Upon receipt of the Procuring Entity's instruction to proceed under Sub-Clause 63.2.2 (a), the Contractor shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with Sub-Clause 63.2.1.

67.2 The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If such rates and prices are inequitable, the parties thereto shall agree on specific rates for the valuation of the Change.

67.3 If before or during the preparation of the Change Proposal it becomes apparent that the aggregate effect of compliance there with, and with all other Change Orders that have already become binding upon the Contractor under this Clause 63, would be to increase or decrease the Contract Price as originally set forth in the Contract Agreement by more than fifteen percent (15%), the Contractor may give a written notice of objection thereto prior to furnishing the Change Proposal as aforesaid. If the Procuring Entity accepts the Contractor's objection, the Procuring Entity shall withdraw the proposed Change and shall notify the Contractor in writing thereof. The Contractor's failure to so object shall neither affect its right to object to any subsequent requested Changes or Change Orders herein, nor affect its right to consider, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Contractor represents.

67.4 Upon receipt of the Change Proposal, the Procuring Entity and the Contractor shall mutually agree upon all matters therein contained. Within fourteen (14) days after such agreement, the Procuring Entity shall, if it intends to proceed with the Change, issue the Contractor with a Change Order. If the Procuring Entity is unable to reach a decision within fourteen (14) days, it shall notify the Contractor with details of when the Contractor can expect a decision. If the Procuring Entity decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Contractor accordingly. Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with Sub-Clause 63.2.2.

67.5 If the Procuring Entity and the Contractor cannot reach agreement on the price for the Change, an equitable

adjustment to the Time for Completion, or any other matters identified in the Change Proposal, the Procuring Entity may nevertheless instruct the Contractor to proceed with the Change by issue of a “Pending Agreement Change Order.”

Upon receipt of a Pending Agreement Change Order, the Contractor shall immediately proceed with effecting the Changes covered by such Order. The parties shall thereafter attempt to reach agreement on the outstanding issues under the Change Proposal.

If the parties cannot reach agreement within sixty (60) days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the Adjudicator in accordance with the provisions of Sub- Clause 6.1.

68 Changes Originating from Contractor

- 68.1 If the Contractor proposes a Change pursuant to Sub-Clause 63.1.2, the Contractor shall submit to the Engineer a written “Application for Change Proposal,” giving reasons for the proposed Change and including the information specified in Sub-Clause 63.2.1.
- 68.2 Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in Sub-Clauses 63.2.6 and 63.2.7. However, should the Procuring Entity choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Application for Change Proposal.

69 Value Engineering

- 69.1 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.
- 69.2 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:
- a Accelerates the delivery period; or
 - b Reduces the Contract Price or the lifecycle costs to the Procuring Entity; or
 - c Improves the quality, efficiency, safety or sustainability of the Road; or
 - d yields any other benefits to the Procuring Entity, without compromising the necessary functions of the Road and Services.
- 69.3 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 **PC** of the reduction in the Contract Price; or
 - b An increase in the Contract Price; but results in a reduction in lifecycle 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.

70 Extension Time for Completion

- 70.1 The Time(s) for Completion specified in the **PC** shall be extended if the Contract or is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:
- a) Any Change in the Works and Services as provided in Clause 63,
 - b) any occurrence of Force Majeure as provided in Clause 38 and unforeseen conditions as provided in Clause 36,
 - c) any suspension order given by the Procuring Entity under Clause 58,
 - d) any changes in laws and regulations as provided in Clause 37, or
 - e) any default or breach of the Contract by the Procuring Entity, or any activity, act or omission of any other contractors employed by the Procuring Entity, or
 - f) any other matter specifically mentioned in the Contract by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.

70.2 Except where otherwise specifically provided in the Contract, the Contractor shall submit to the Engineer a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Procuring Entity and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the Procuring Entity's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to an Adjudicator, pursuant to Sub-Clause 6.1.

70.3 The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

72 Release from Performance

72.1 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 Engineer 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 afterward to which a commitment was made.

73 Fraud and Corruption

73.1 The Procuring Entity requires compliance with the national Anti-Corruption Laws and Regulations and its prevailing sanctions policies and procedures.

73.2 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 Tendering 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.

SECTION VII - SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions shall supplement the GC. They are to be completed by the Procuring Entity and presented as part of the tendering document. Whenever there is a conflict, the provisions here in shall prevail over those in the GC.

Reference to GC clauses

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.	The project comprises the following roads located in NAIROBI NATIONAL PARK: i. JUNCT 7 -HIPPO POOLS-ATHI BASIN-JNCT 10 ROAD (UNCL_NNP_7) ii. JUNCT 7 – EAST GATE ROAD (UNCL_NNP_9) The Engineer is: Senior Principal Superintending Engineer (Roads), Kenya Wildlife Service, P.O. Box 40241 - 00100 <u>NAIROBI.</u>
5.	The address of the Procuring Entity is: Kenya Wildlife Service, P.O. Box 40241 – 00100, <u>NAIROBI</u> Tel: 0202379407 Email: hps@kws.go.ke The address of the Contractor is: The address of the Contractor is: Name Physical address (street, City, Building name, floor, room No. Postal Address..... Email Address..... Telephone Number.....
8.4.1	The Contractor is obliged to prepare and to furnish to the Engineer for Approval the following documents: 1. Work program 2. Cash flow 3. Technical Personnel 4. Methodology 5. Material test certificates and results

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract			
10.1	The Start Date shall be not later than 45 days after the issuance of the Form of Acceptance by the Procuring Entity.			
10.2	The Time Schedule for the achievement of specific Service Levels is:			
	Contract Month	Road Usability Compliance required on % of contract road	Road User Comfort Compliance required on % of contract road	Road Durability Compliance required on % of contract road
	1	50	50	50
	2	100	75	75
	3	100	100	100
	Until end of Contract	100	100	100
12.1	The Contractor is specifically NOT allowed to subcontract any activity.			
12.2	The Contractor may subcontract under his own responsibility and without prior approval of the Procuring Entity the following Works and Services provided they do not represent more than <i>[insert number]</i> percentage of the contract value: NOT APPLICABLE .			
14.2	The Procuring Entity shall give full possession of and access to the Site upon issuing order to commence works.			
17.1	Key Personnel Key Personnel are defined as the Contractor's personnel named in the Special Conditions of Contract. ROADS MANAGER..... SITE AGENT..... SITE FOREMAN..... SITE SURVEYOR.....			
21	The Contractor shall carry out the Rehabilitation Works, which are detailed in the Specifications: [AS PER THE BILL OF QUANTITIES AND INSTRUCTIONS FROM THE ENGINEER'S REPRESENTATIVE ON SITE]			
22.1	The Contractor shall carry out the following Improvement Works, which are detailed in the Specifications and Bill of Quantities: [NOT APPLICABLE]			
25.2	The Contractor shall establish a Self-Control Unit			

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract				
32.1 and 33.1	Further to Clause 32.1 and 33.1, schedule of allocated risks are as follows;				
	Risk Item	Rehabilitation Contracts		PBC Contracts	
		Public Sector	Contract or	Public Sector	Contractor
	Design Risk	√			√
	Construction Risk		√		√
	Technical & Management Risk	√			√
	Performance Risk	√			√
	Traffic & Volume Risk	√		√	
	Political Risk	√		√	
	Social & Environmental Risk	√		√	√
35.1	The Contractor shall take out and maintain in effect the following insurances in the sums and deductibles shown below in the name of both the Contractor and the Employer: a) Loss of or damage to the Plant and Materials-Covering loss or damage occurring prior to Completion. b) Third Party Liability Insurance-Covering bodily injury or death suffered by third parties (including the Procuring Entity's personnel) and loss of or damage to property occurring in connection with Works and Services. c) Automobile Liability Insurance - Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract. d) Workers' Compensation-In accordance with the statutory requirements applicable in any country where the Contractor any part thereof is executed. e) Procuring Entity's Liability - In accordance with the statutory requirements applicable in any country where the Contractor any part thereof is executed. f) Other Insurances – Such other insurances as may be specifically agreed upon by the parties.				
39.1	The Time for Completion are the following: REHABILITATION WORKS –NOT MORE THAN THREE (3) MONTHS PERFORMANCE BASED MAINTENANCE WORKS- TWELVE (12) MONTHS				
39.3	For Rehabilitation/ Instructed Works, the liquidated damages are 0.05% per calendar day of delay, of the payment normally due for the specific Works for which completion is delayed. For Improvement Works, the liquidated damages are 0.05% per calendar day of delay, of the payment normally due for the specific Works for which completion is delayed. The limit of liquidated damages under this is 5% of the contract sum.				
42.1	The aggregate liability of the Contractor to the Procuring Entity, excluding payment reductions defined in GC 47.1, shall not exceed the amount of 15 PERCENT OF CONTRACT AMOUNT				

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
44.1	The payment of the Contract Price will be made in the following currencies: KENYAN SHILLINGS
45.1	The amount of the Advance Payment is NO ADVANCE PAYMENT SHALL BE MADE The Advance payment will be made by NOT APPLICABLE
45.3	The Advance payment will be repaid during NOT APPLICABLE initial monthly payments at the rate of NOT APPLICABLE of the amount advanced in each monthly payment until the repayment of the total amount.
47.2	Rehabilitation Works will be measured on the following basis: QUANTITY OF ACTUAL WORK OUTPUTS DEFINED IN THE SPECIFICATIONS AND THE BILL OF QUANTITIES PROVIDED
47.3	Improvement Works will be measured on the following basis: NOT APPLICABLE
48.1	Price adjustment [NOT APPLICABLE]
51.1	The retention for Rehabilitation Works is fixed at FIVE (5) PERCENT OF THE VALUED WORKS.
53. 1	The amount of the Advance payment security is the same of the advance payment amount. NO ADVANCE PAYMENT IS ALLOWED
54.1	The Performance Security amount is (a) Demand Bank Guarantee: of 5 % per cent of Contract Price and denominated in Kenya Shillings. (b) Performance Bond: NOT APPLICABLE
54.2	The performance security will be in the form of a DEMAND BANK GUARANTEE
57.1	The following Drawings and/or Manuals are required at the following dates: NONE.
57.2	If the required documents are not supplied in accordance with PC 57.1, the amount to be withheld is NOT APPLICABLE.
61.1(c)	The condition of persistent failure to execute the contract is given if and when the total amount of payment reductions and liquidated damages applied under the contract reaches 15% percent of the total contract amount.
65.1	The Procuring Entity has the right to propose a change in the contract: YES.
65.1	Contractor's right to propose a change in the contract: YES
69.3	Value Engineering (d) NOT APPLICABLE
69.3	Value Engineering NOT APPLICABLE.

SECTION VIII - CONTRACT FORMS

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 Tenderer Information Form] For the attention of Tenderer's Authorized Representative

Name:*[insert Authorized Representative's name]*

Address: *[Insert Authorized Representative's Address]*

Telephone numbers: *[Insert Authorized Representative's telephone/fax numbers]*

Email Address: *[Insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: *[Email/fax] on [date] (local time)*

Notification of Intention to Award

Procuring Entity: *[Insert the name of the Procuring Entity]*

Project: *[Insert name of project]*

Contract title: *[Insert the name of the contract]*

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:

- a) Request a debriefing in relation to the evaluation of your Tender, and/or
- b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

1) The successful Tenderer

Name:	<i>[insert name of successful Tenderer]</i>
Address:	<i>[insert address of the successful Tenderer]</i>
Contract price:	<i>[insert contract price of the successful Tender]</i>

- 2) Other Tenderers *[INSTRUCTIONS: insert names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.]*

Name of Tenderer	Tender price	Evaluated Tender price (if applicable)
<i>[insert name]</i>	<i>[insert Tender price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Tender price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Tender price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Tender price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Tender price]</i>	<i>[insert evaluated price]</i>

3) Reason/s why your Tender was unsuccessful

[INSTRUCTIONS: State the reason/s why this Tenderer's Tender was unsuccessful. Do NOT include: (a) appoint by point comparison with another Tenderer's Tender or (b) information that is marked confidential by the Tenderer in its Tender.]

4) How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [insert date] (local time).

You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

Attention: *[Insert full name of person, if applicable]*

Title/position: *[Insert title/position]*

Agency: *[Insert name of Procuring Entity]*

Email address: *[Insert email address]*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5) How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[Insert date] (Local time)*.

Provide the contract name, reference number, name of the tenderer, contact details; and address the Procurement-related Complaint as follows:

Attention: *[Insert full name of person, if applicable]*

Title/position: *[Insert title/position]*

Agency: *[Insert name of Procuring Entity]*

Email address: *[Insert email address]*

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information refer to the PPRA's Website www.ppra.go.ke or email complaints@ppra.go.ke.

You should read these provisions before preparing and submitting your complaint. In summary, there are four essential requirements:

1. 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.
2. The complaint can only challenge the decision to award the contract.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

6) Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [insert date] (local time).

The Standstill Period lasts fourteen (14) Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature:_____

Name:_____

Title/position:_____

Telephone:_____

Email:_____

2. REQUEST FOR REVIEW

FORM FOR REVIEW (r.203 (1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO.....OF.....20.....

BETWEEN

.....APPLICANT

AND

.....RESPONDENT (Procuring Entity)

Request for review of the decision of the..... (Name of the Procuring Entity of dated the...day of 20.....in the matter of Tender No.....of 20..... for (Tender description).

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical address.....P. O. Box No..... Tel. No.....Email, hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

- 1.
- 2.

By this memorandum, the Applicant requests the Board for an order/orders that:

- 1.
- 2.

SIGNED (Applicant) Dated on.....day of/...20.....

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on.....day of 20.....

SIGNED

Board Secretary

3. LETTER OF AWARD

[Form head 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 of the equivalent of..... [Amount in numbers and words] [Name of currency], as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 21 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security included in Section VIII, Annex to the Special Conditions of Contract-Contract Forms, of the tendering document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

4. CONTRACT AGREEMENT

THIS AGREEMENT made the _____ day of _____, _____, between _____ of _____ (herein after “the Procuring Entity”), of the one part, and _____ of _____ (herein after “the Contractor”), of the other part:

WHEREAS the Procuring Entity desires that the Works and Services 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.
1. 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 Form of Acceptance
 - b) The Form (Letter) of Tender
 - c) The addenda Nos _____ (if any)
 - d) The Special Conditions of Contract
 - e) The General Conditions of Contract;
 - f) The Specification
 - g) The Drawings;
 - h) The completed Schedules, and
 - i) Any other document listed in the SCC as forming part of the Contract;
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and Services, 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 Services, 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 where of the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year indicated above.

Signed by _____ (for the Procuring Entity)

Signed by _____ (for the Contractor)

5. PERFORMANCE SECURITY - OPTION 1: DEMAND GUARANTEE

[Guarantor Form head or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of Procuring Entity]*

Date: _____ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: _____ *[Insert guarantee reference number]* Guarantor:

_____ *[Insert name and address of place of issue, unless indicated in the Form head]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (Herein after called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (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 sums specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

[Signature(s)]

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

¹The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Form of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

²Insert the date twenty-eight days after the expected completion date. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

6. PERFORMANCE SECURITY - OPTION 2: PERFORMANCE BOND

By this Bond _____ as Principal (herein after called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Obligee (herein after 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.

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 there to, which to the extent here in provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

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 Tenderer, 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 Contractor 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 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.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond. 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.

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 _____

7. ADVANCE PAYMENT SECURITY - DEMAND GUARANTEE

[Guarantor Form head or SWIFT identifier code]

Beneficiary: _____ [Insert name and Address of Procuring Entity]

Date: _____ [Insert date of issue]

ADVANCE PAYMENT GUARANTEE No.: _____ [Insert guarantee reference number] Guarantor:

_____ [Insert name and address of place of issue, unless indicated in the Form head]

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (Herein after called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ () is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ ()¹ 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
- (a) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number _____ at _____.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on _____ the day of _____, 2_____,² whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

[Signature(s)]

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

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency (ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Procuring Entity.

² Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

8. RETENTION MONEY SECURITY - DEMAND GUARANTEE

_____[Guarantor Form head]

Beneficiary: _____[Insert name and Address of Procuring Entity]

Date: _____[Insert date of issue]

RETENTION MONEY GUARANTEE No.: [Insert guarantee reference number]

Guarantor:[Insert name and address of place of issue, unless indicated in the Form head]

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 Applicant") has entered into Contract No. _____[insert reference number of the contract] dated _____ with the Beneficiary, for the execution of _____[insert name of contract and brief description of Works] (herein after called "the Contract").

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, payment of [insert the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking- Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and is to be made against a Retention Money guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____[insert amount in figures] (_____) [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 Applicant 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.

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 Applicant on its account number _____at _____[insert name and address of Applicant's bank].

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.

[Signature(s)]

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

¹The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Beneficiary.

²Insert the same expiry date as set forth in the Performance Security, representing the date twenty-eight days after the completion date. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

9. BENEFICIAL OWNERSHIP DISCLOSURE FORM

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

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [insert identification no]

Name of the Tender Title/Description: _____ [insert name of the assignment] to:

_____ [insert complete name of Procuring Entity]

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

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

Details of beneficial ownership

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
1.	Full Name		Directly---- ----- % of shares Indirectly-- ----- % of shares	Directly.....% of voting rights Indirectly----- ---% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No---- 2. Is this right held directly or indirectly?: Direct..... Indirect.....	1. Exercises significant influence or control over the Company body of the Company (tenderer) (Yes / No) Yes ----No-- -- 2. Is this influence or control exercised directly or indirectly?
	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	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)	
					Direct..... Indirect.....	
2.	Full Name		Directly--- ----- % of shares	Directly.....% of voting rights	1.Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No---- 2.Is this right held directly or indirectly?: Direct..... Indirect.....	1.Exercises significant influence or control over the Company body of the Company (tenderer) Yes ----No- --- 2.Is this influence or control exercised directly or indirectly? Direct..... Indirect.....
	National identity card number or Passport number					
	Personal Identification Number (where applicable)		Indirectly-- ----- % of shares			
	Nationality(ies)					
	Date of birth [dd/mm/yyyy]					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
3. e.t .c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the

Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company; or
- (d) exercises significant influence or control, directly or indirectly, over the company.

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

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

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

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

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

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

Bidder Official Stamp