COUNTY GOVERNMENT OF WAJIR

P.O BOX 9 -70200, WAJIR

PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA

OPEN TENDER

TENDER NO.WCG/RTD/OT/12/2026-2027

CLOSING DATE: 10TH NOVEMBER 2026

NOVEMBER, 2026

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TENDER DOCUMENTS FOR: - PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA

NAME AND CONTACT ADDRESSES OF PROCURING ENTITY

Name: COUNTY GOVERNMENT OF WAJIR, DEPARTMENT OF ROADS AND TRANSPORT

Address: P.O.BOX 9, 70200 WAJIR

Email address: supplychain@wajir.go.ke

Invitation to Tender (ITT) No: WCG/RTD/OT/12/2026-2027
Tender Name: PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA

INVITATION TO TENDER

PROCURING ENTITY: COUNTY GOVERNMENT OF WAJIR, DEPARTMENT OF ROADS AND TRANSPORT

CONTRACT NAME AND DESCRIPTION – PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA

The **COUNTY GOVERNMENT OF WAJIR, DEPARTMENT OF ROADS AND TRANSPORT** invites sealed tenders for the **PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA** Tendering will be conducted under open competitive method National using a standardized tender document. Tendering is open to all qualified and interested Tenderers.

Qualified and interested tenderers may obtain further information and inspect the Tender Documents at the Head Supply Chain Management Office, Wajir Governor's Office 2nd floor during normal working hours.

A complete set of tender documents may be purchased or obtained by interested tenders upon payment of non- refundable fees of in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website www.wajir.go.ke. Tender documents obtained electronically will be free of charge.

Tender documents may be viewed and downloaded for free from the website www.wajir.go.ke Tenderers who download the tender document must forward their particulars immediately to ***COUNTY GOVERNMENT OF WAJIR P.O BOX 9-70200 WAJIR*** *to* facilitate any further clarification or addendum.

Tenders shall be quoted be in Kenya Shillings and shall include all taxes. Tenders shall remain valid for **150 days** from the date of opening of tenders.

The Tenderer shall chronologically and sequentially serialize all pages in a numerical format 1,2,3,4,5……. Including the cover page of the tender documents submitted.

Completed tenders must be delivered to the address below on or before **10TH NOVEMBER 2026 AT 11.00 AM** Electronic Tenders *will not* be permitted.

Tenders will be closed on **10TH NOVEMBER 2026 AT 11.00 AM** and thereafter be opened at the date and time specified above. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.

Late tenders will be rejected.

The addresses referred to above are:

Address for obtaining further information and for purchasing tender documents

COUNTY GOVERNMENT OF WAJIR

GOVERNOR'S OFFICE, COUNTY GOVERNMENT OF WAJIR HEADQUARTERS TENDER BOX

P.O.BOX 9-70200

CCO ROADS AND TRANSPORT

Address for Submission of Tenders.

1) COUNTY GOVERNMENT OF WAJIR

2) P.O.BOX 9-70200

3) GOVERNOR'S OFFICE, COUNTY GOVERNMENT OF WAJIR HEADQUARTERS TENDER BOX

Address for Opening of Tenders.

COUNTY GOVERNMENT OF WAJIR

GOVERNOR'S OFFICE, COUNTY GOVERNMENT OF WAJIR HEADQUARTERS GROUND FLOOR

Authorized Official

Name: (**CCO ROADS AND TRANSPORT)**



TENDER

The County Government of Wajir invites eligible bidders, to submit sealed bids for the following advert.

S/N	TENDER NO	TENDER DESCRIPTION	TENDER SECURITY	ELIGIBILITY	NCA CATEGORIES
1.	WCG/RTD/OT/12/2026-2027	PROPOSED CONSTRUCTION OF 4 CELL BOX CULVERT AT ADEMASAJIDA	1,000,000	OPEN	NCA 6 & above – Road Works

County Government of Wajir invites sealed bids from eligible bidders for the tenders which are available on our website www.wajir.go.ke and www.treasury.go.ke.
All prospective bidders are hereby advised to check the details of the various tenders on the website and download them free of charge.
Completed tender documents must be submitted in a plain sealed envelope marked with the tender name and reference number and be deposited at the tender box situated at the Ground Floor - Wajir County Headquarters office on or before **10TH NOVEMBER 2026 AT 11.00 AM**. Further, the bidders are strictly advised to follow the instructions there under.

HEAD OF SUPPLY CHAIN MANAGEMENT
WAJIR COUNTY GOVERNMENT

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 Two 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 emailcomplaints@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 be 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 websitewww.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

PART 3-Conditions of Contract and Contract Forms

Section VI - General Conditions of Contract

Section VII - Special Conditions of Contract Section IX-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.

B. 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:

i. 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

ii. 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 13and 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.

C. 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.

21.2 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

D. 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 only when 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.

E. 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

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

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.

A. General	
	Name of the contract: **PROPOSED** **CONSTRUCTION OF 4 CELL BOX CULVERT** **AT ADEMASAJIDA** The reference number of the Invitation to Tender is**:** **WCG/RTD/OT/12/2026-2027** The Procuring Entity is: **DEPARTMENT OF ROADS AND** **TRANSPORT** The name of the ITT is: ***Not Applicable*** The number and identification of lots (contracts) comprising this ITT T is: ***Not Applicable*** The Road are: 1. ADEMASAJIDA, Wajir County Construction of Box Culverts Required**.** The sections of the Road(s) subject to Rehabilitation Works are: 1. (Wajir County – ADEMASAJIDA, Wajir West Sub county) Improvement Works **are** required.
ITT 4.1	Maximum number of members in the JV shall be: ***None***
4.10	Citizen contractors are encouraged to source locally manufactured items/materials and locally assembled machines, equipment, vehicles, labour etc.
ITT4.11	The Tenderer will require to register with whose contact addressed are: ***Not Applicable***
B. Contents of Tender Document	
ITT 7.1	**Pre-tender site visits is not required**
ITT 8.1	There shall be no **mandatory pre-tender site visits** as specified in the tender notice.
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than ***7 days to the submission date***

ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender will be published is ***www.wajir.go.ke*** Nonattendance at the pre-Tender Site meeting will not be a cause for disqualification of a Tenderer
ITT9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: ***As indicated in the tender notice***
ITT 10.2	Addendum shall be effected and attached to form part of tender document and failure to attach will lead to disqualification.
C. Preparation of Tenders	
ITT 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: ***As indicated in the Qualification Criteria***
ITT 15	*[The following provision should be included and the required corresponding information inserted only if alternative Tenders will be considered. Otherwise omit.}* 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 be permitted for the following parts of the Works: ***Not Applicable***
ITT 16.2	Items against which no rate or price is entered by the Tenderer will be considered as an error and shall lead to disqualification
ITT 16.5	*The Tenderer is required to furnish the indices and weightings published* at least 30 days prior to tender submission *for the price adjustment formulae in the Schedule of Adjustment Data.*
ITT 17.1	The currency(ies) of the Tender and the payment currency(ies) shall be in **Kenya Shillings**
ITT 20.1	The Tender validity period shall be ***150 days*** from the specified date of opening as indicated in the invitation to Tender
ITT 21.1	A Tender Security of the amount specified in the Appendix to form of Bid Kshs. 1,000,000.00 ***shall be*** required.
ITT 21.2	*Provide a Bank Guarantee only*
ITT 21.2 (iv)	Other types of acceptable securities: ***Not Applicable***
ITT 21.7	***[The following provision should be included and the required corresponding information inserted only if a Tender Security is not required under provision ITT 21.7 and the Procuring Entity wishes to declare the Tenderer ineligible for a period of time should the Tenderer perform any of the actions mentioned in provision ITT 21. 7 (a) or (b), Otherwise omit.]*** If the Tenderer performs any of the actions prescribed in ITT 19.9 (a) or (b), the Procuring Entity will declare the Tenderer ineligible to be awarded contracts by the Procuring Entity for a period of ***two (2)*** years.
ITT 22.1	In addition to the original of the Tender, the number of copies is: ***ONE***

ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: _ *Certificate of Independent Tender Determination* ***Part B of Form of Tender***

ITT 24.1	A) For Tender submission purposes only, the Procuring Entity's address is: P.O.BOX 9, 70200 Attention: **CCO ROADS AND TRANSPORT** Postal Address: **P.O.BOX 9-70200** Physical Address: **GOVERNOR'S OFFICE, COUNTY GOVERNMENT OF WAJIR, GROUND FLOOR** Electronic mail address: supplychain@wajir.go.ke The deadline for Tender submission is: Date: **10TH NOVEMBER 2026.** Time: **11:00AM** Tenders shall not submit tenders electronically
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of Tenders provided below: **COUNTY GOVERNMENT OF WAJIR** **P.O BOX 9-70200 WAJIR GOVERNOR'S OFFICE GROUND FLOOR** Date: 10TH NOVEMBER 2026 Time: 11:00AM 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. If initialization is required, it shall be conducted as follows: • ***By all members of the Tender opening committee*** • ***Form of Bid and Summary of BOQs***
ITT 32.3 (a)	The Tender price shall be adjusted by the following factor(s): Not Applicable.
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 maximum volume of works that can be subcontracted is 40% of the total contract price.
ITT 35.3	The sub contractor's qualifications shall not be used by the Tenderer to qualify for the Works.
ITT 36.2	A margin of domestic preference shall apply. [If a margin of preference applies, the application methodology shall be defined in the Evaluation and Qualification Criteria]
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in the Evaluation and Qualification Criteria.
ITT 37.5	The combined price for the Rehabilitation and Improvement Works may not exceed the following threshold: NOT APPLICABLE %of the total contract price excluding provisional sums
ITT 39	Abnormally low Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
ITT 40	Abnormally high Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
ITT 41	Unbalanced or Front loaded Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
ITT42.2	Where prequalification has not taken place, the Procuring Entity shall not permit that specific experience for parts of the Works and Service may be met by Specialized Subcontractors.
ITT 48.1	Contract negotiations with the best evaluated tenderer will be held at: (Not Applicable)

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: HEAD OF SUPPLY CHAIN MANAGEMENT Procuring Entity: COUNTY GOVERNMENT OF WAJIR Email address: supplychain@wajir.go.ke In summary, a Procurement-related Complaint may challenge any of the following (among others): (i) the terms of the Tender Documents; and (ii) the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provisions

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:

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

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

c) Exchange rates shall be taken from the publicly available source identified in the ITT. 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.

S/No.	Completeness and Responsiveness Criteria	References	Requirement
1.	Form of Tender	Section IV	Tenderer shall Prepare Form of Tender with its letter head clearly showing the Tenderer's complete name and business address.
2.	Tenderers Eligibility Confidential Business Questionnaire	Section IV	Properly fill, sign and Stamp Provide all required information
3.	Certificate of Independent tender determination	Section IV	Properly fill, sign and Stamp **Provide** all required information

S/No.	Completeness and Responsiveness Criteria	References	Requirement
4.	Self-Declaration Form (SD1, 2)	Section IV	Properly fill, sign and Stamp Provide all required information in the two forms
5.	Declaration and Commitment to Code of Ethics	Section IV	Properly fill, sign and Stamp Provide all required information
6.	Tax Compliance Certificate	Tender notice	Provide valid tax compliance certificate
7.	Registration with National Construction Authority (NCA)	Tender notice	Copy of valid certificate of Registration for Road Works in Category 6 and Above accompanied by a valid practicing license
8.	Certificate of Incorporation	Item 1.4 of QC	Copy of certificate Certified by Commissioner for Oaths
9.	Certificate of Recent CR12	Tender notice	Provide a copy of Certified recent CR12 (within last 6 months) certificate
10.	Certificate of Registration in a target group	Tender notice	Open for all
11.	Priced Bill of Quantities	Section IV (Bill of Quantities)	Fill all the bill of Quantities, sign stamp and counter sign any alteration(s)
12.	Projected Cash Flow	Section IV, Schedule A	Properly fill, sign and Stamp Provide all required information
13.	Site Organization	Section IV, Schedule B	Provide all required information
14.	Contractor's Equipment Form	Section IV, Schedule D	Fully fill all the required information, Sign and Stamp
15.	Key Personnel Schedule (Form PER I)	Section IV, Schedule F	Provide all required information, sign and stamp in the format provided. Declaration form to be filled, signed and stamped
16.	Key Personnel Schedule (Form PER II)	Section IV, Schedule F	Provide all required information, sign and stamp. Declaration form to be filled, signed and stamped.
17.	Tenderers Qualification Form	Section IV, Form ELI – 1.1	Form to be fully filled, signed and stamped as instructed.

S/No.	Completeness and Responsiveness Criteria	References	Requirement
18.	Non-Performed Contracts	Section IV, Form CON 1	Form to be fully filled, stamped and signed Provide all the information
19.	Financial situation and performance	Section IV, Form FIN-3.1(1,2 &3) Section IV, Form FIN- 3.2 Section IV, Form FIN- 3.4	Form to be fully filled as required, stamped and signed Provide all the required information
20.	General and Specific Construction Experience	Section IV, Form EXP-4.1 -Section IV, Form EXP-4.2(a),(b)	Form to be fully filled as required, stamped and signed Provide all the required information
21.	Form of Tender Bond/Tender declaration Form	Section IV, Form of Tender bond/tender declaration form	Provide unconditional bank guarantee from a recognized financial institution with all the required conditions as per the provided format. Must be valid for 30 days after bid validity.
22.	Pending Litigation	Section IV, Tenderers qualification forms; Form CON-1	Form to be fully filled as required, stamped and signed Provide all the required information
23.	Litigation History	Section IV, Tenderers qualification forms; Form CON-1	Form to be fully filled as required, stamped and signed Provide all the required information
24.	Serializing of document	ITT No. 6	Serialize chronologically and sequentially all pages of the tender documents submitted in the format of i.e 1,2,3,4,5……. Including the cover page and all other pages
25	Single Business Permit	Tender Notice	Provide certified copy of single business permit

S/No.	Completeness and Responsiveness Criteria	References	Requirement
26	Director's ID	Tender Notice	Provide certified copy of director's ID
27	Power of Attorney	Tender Notice	Provide signed and stamped power of attorney

NB. All Mandatory Document will be verified from the respective institutions and must be certified by commissioner of OATHS.

MANDATORY REQUIREMENT

S/NO	**Requirements**	**Score**
1.	Bidders shall provide Tender Security of Kshs. 1,000,000 as provided or indicated	Mandatory
2.	**Certified** Certificate of incorporation or Registration Certificate	Mandatory
3.	**Certified** Copy of valid certificate of Registration of National Construction Authority for Roads works in Category 6 and Above accompanied by a valid practicing license.	Mandatory
4.	**Certified** copy of company's list of directors, beneficial owners, name of proprietor or names of partners (Copy of CR12 / CR13) issued within the last six (6) month and showing the list of directors (certified by commissioner for oaths) accompanied by **Certified** Copies of Director(s) Identification's document (ID-Card/Passport).	Mandatory
5.	**Certified** Copy of Current Single business permit from Wajir County Government.	Mandatory
6.	**Certified** Copy of Valid Tax Compliance Certificate and Company KRA pin (Will be verified on the KRA TCC Checker)	Mandatory
7.	Bid document **MUST** be in the original and copy and **MUST** be **sequentially serialized (paginated**) on every page including and not limited to attachments Submission of two Tender documents securely bound (Spiral or book) and clearly marked (original and (copy) by the tenderer. No loose documents will be accepted.	Mandatory
8	Submit Tender Form in the company Letter head duly Completed, Signed and Stamped by The Tenderer in the format provided.	Mandatory
9	Must submit a duly filled up Confidential Business Questionnaire, signed and stamped	Mandatory
10	Written and signed Power of attorney/litigation history	Mandatory
11	Evidence of Physical Registered Office (Attach Utility Bills/ Lease Agreement /Rental Payment Receipt/Evidence of Ownership of The Premises).	Mandatory
12	Duly Filled, Signed and stamp debarment letter /Debarment form (SDI)	Mandatory
13	Duly Filled, Signed and stamp certificate of independent tender Determination	Mandatory
14	Duly Filled, Signed and stamp fraud and corruption declaration Form (SD2)	Mandatory
15	Duly Filled, Signed and stamp declaration and commitment to the code of ethics	Mandatory

TECHNICAL CRITERIA

1	TECHNICAL STAFF		Max.13Marks
	(a) Site Manager		Max 7
	• Registered Professional Civil Engineer		0-2
	• Qualification = Degree in Civil Engineering		0-2
	• General Experience=7 rs		0-1
	• Specific Experience=5 yrs		0-2
	(b) Senior Foremen		Max 3
	Qualification = Diploma in Civil Engineering		0-1
	. General Experience=7 yrs		0-1
	. Specific Experience=5 yrs		0-1
	(c)Surveyor		Max 3
	. Qualification = Dip. Surveying		0-1
	. General Experience = 7 yrs		0-1
	. Specific Experience = 5 yrs		0-1
2	PLANT AND EQUIPMENT	Min. No	Owned/ lease Max.26
	• Excavator	1	5
	• Grader	1	4
	• Tippers 15-28 tonnes	4	5
	• Wheel Loader	1	2
	• Mobile Mixer (4.5m3) and above	1	4
	• Drum Roller	1	3
	• Flat Bed Truck	1	3
3	WORK EXPERIENCE		Max 26
	• General Experience as Contractor within the last 10 years.		0-3
	• Experience in road construction/Bridge works within the last 10 years.		0-3
	• Participation as a Road's Contractor, Management Contractor or Subcontractor, in at least two (2) Road/Bridges construction contracts in East Africa Community with a **minimum cummulative** value of at least **Kenya Shillings One hundred (100) Million, successfully and substantially completed within the last 5 years.**		0-20
4	**WORK METHODOLOGY**		Max 3
	Submission of a brief work methodology giving a brief description of how you intend to carry out the work including; Signed resourced work **programme chart on A3 SHEET with** SUPERIMPOSED cash flow projection, traffic management, quality assurance of works and general Site organization in not less than three (3) pages and not more than five (5) pages (typed, font 12 and single spaced).		0-3
5	**TRAFFIC MANAGEMENT**		Max 2
	Proposals on traffic control, workers safety & accident prevention measures		0-2

6	**ENVIRONMENTAL MANAGEMENT**	Max 5	
	Proposal on social mitigation measures	0-5	
TOTAL TECHNICAL SCORE		75 Max.	
9	**FINANCIAL CAPACITY**	Max. 25 MKS	
	a) Working capital of Kshs. 50,000,000.00	0-15	
	b) Bank statements demonstrating sufficient financial capacity	0-3	
	c) Audited Statements of account for the last 3 years presented in the Internationally Financial Reporting Standard	0-2	
	d) Turnover of Kshs. 100,000,000.00	0-5	
TOTAL FINANCIAL SCORE		Max 25 Mks	

FINAL SCORE SHEET

NO	CATEGORY	MAX MARKS
1	TECHNICAL EVALUATION	75
2	FINANCIAL EVALUATION	25
TOTAL		100

- **N/B: - Technical + Financial= 100 Marks**
- **Pass Mark is 70 marks. Tenderers that pass technical evaluation with a pass mark of 70 marks proceed to financial evaluation.**
- **The lowest responsive and technically qualified tenderer wins the bid.**

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:

i) History of non-performance

ii) Financial capability

iii) General and specific experience

iv) Key personnel

v) Contractors Plant and Equipment

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

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

75points.

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

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, if permitted under ITT 13.2, will be evaluated as follows: ……NA….....

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

iii) Other Criteria; if permittedunder ITT 35.2 (e): ……. NA.....…

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

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

6. Alternative Tenders (ITT 13.1)

An alternative if permitted under ITT 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

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:

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

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

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 ward (ITT 39), more specifically

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

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

QUALIFICATION FORM

1	2	3	*4*	*5*
Item No.	Qualification Subject	Qualification Requirement	*Document To be Completedby Tenderer*	*For Procuring Entity's Use (Qualification MET or NOT MET)*
1.	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2.	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.14.	TDS; ITT 13.1 (h)	
3.	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender Confidential Business Questionnaire	
4.	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.8	Form of Tender ITT 11.1	
5.	State- owned Enterprise	Meets conditions of ITT 3.7	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
6.	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
7.	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1st January, 2020	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 19.9	Form of Tender part xiii	
9.	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in section III of evaluation criteria 7 b(vi) b and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
10.	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1st January, 2020 to date	Form CON – 2	
11.	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor within the last 10 years,	Form EXP – 4.1	

		starting 1st January, 2014		
12.	Specific Construction & Contract Management Experience	A minimum number of TWO (2*)* similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1st January, 2018 and tender submission deadline i.e.two (2) contracts, with minimum **cummulative** value Kenya shillings of 100,000,000.00 equivalent.	Form EXP 4.2(a)	
13.	Contractor's Equipment	-Bidder shall provide evidence of ownership whether owned or leased - Those hiring shall provide certified copies of Lease Agreement	Form EQU and Equipment Table (9) below	
14.	Contractor's Representative and Key Personnel	The site staff shall possess minimum levels of qualifications set below; HQ Staff: Qualification = Diploma in Civil Engineering/Building construction Site Agent: Qualification = Degree in Civil Engineering Professional License General Experience – 7yrs Specific Experience -5 yrs Foreman: Qualification = Dip. Civil Engineering General Experience = 7 yrs Specific Experience = 5 Yrs Surveyor: Qualification = Diploma in Survey General Experience = 7 yrs Specific Experience = 5Yrs	Form PER -1 and Form PER-2	

1. CONTRACTOR'S EQUIPMENT.

The Bidder shall indicate the core plant and equipment considered by the company to be necessary for undertaking the project together with proof of ownership or lease of the same. The lease must be current i.e. dated from July, 2021. Leases which are out dated will not be accepted. (* Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder shall make available for the Contract).

Equipment Details	**Ideal Number Required for the Contract Execution**	**No. of Equipment Owned by the Bidder**	**No. of equipment to be hired/Leased by the Bidder**	**No. of equipment to be made available for the Contract by the Bidder**	**Date of Arrival on Project (Days after commence)**
A) Chippings					
(i) Chips spreader	0				
B) Transport (Tippers, dumpers, water tankers)					
(i) 6 X 4 tippers payload 15 – 28 tonnes	4				
C)Earth – Moving Equipment					
(i) Mobile Mixers min 4.5m3	1				
D. Excavator	1				
E.Grader	1				
F.Wheel Loader	1				
G. ROLLERS					
1. Double drum	1				
H.Rollers					
(ii) Self-propelled single drum vibrating (various types) (iii)Pneumatic Roller	1 1				
I) Others					
(iv) Paver (v)Pot hole cutter (vi) Hand sprayer (vii) Pedestrian Roller	0 0 0 0				

I certify that the above information is correct.

Signature of Tenderer: …… Date: ……

SECTION IV - TENDERING FORMS

QUALIFICATION FORMS

1. FORM: EQUIPMENT

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

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

Omit the following information for equipment owned by the Tenderer.

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

2. FORM PER-1

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

Contractor' Representative and Key Personnel

1.	Title of position:	
	Name of candidate: …….	
	Duration of appointment:	……[*insert the wholeperiod(startandenddates) for which this position will be engaged*]
	Time commitment: for this position:	…… [*insert the number of days/week/months/ thathasbeenscheduledfor 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: Foreman	
	Name of candidate: …….	
	Duration of appointment:	……[*insert the wholeperiod(startandenddates) for which this position will be engaged*]
	Time commitment: for this position:	…… [*insert thenumber of days/week/months/ thathasbeenscheduledfor this position*]
	Expected time schedule for this position:	……. [*insert theexpected timeschedule for thisposition (e.g. attach high level Gantt chart*]
3.	Title of position: Surveyor	
	Name of candidate: …….	
	Duration of appointment:	……[*insert the wholeperiod(startandenddates) for which this position will be engaged*]
	Time commitment: for this position:	…… [*insert the number of days/week/months/ that hasbeenscheduledfor this position*]

	Expected time schedule for this position:	…… [*insert theexpected timeschedule for thisposition (e.g. attach high level Gantt chart*]

3. FORM PER-2:

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

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

Name of Tenderer ……

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

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

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

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

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

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

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

a) be taken into consideration during Tender evaluation;

b) my disqualification from participating in the Tender;

c) my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature:_____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

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

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

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

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for

this position as provided in the Tender:

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

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

d) be taken into consideration during Tender evaluation;

e) my disqualification from participating in the Tender;

f) my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature:_____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

4. TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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

4.1 FORM ELI -1.1

Tenderer Information

Form Date: _____

ITT No. 13.1 and title: DOCUMENTS COMPRISING THE TENDER

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

4.2 FORM ELI -1.2

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

ITT No. and title: *NOT APPLICABLE*

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

4.3 FORM CON – 2

Historical Contract Non-Performance, Pending Litigation and Litigation

History Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

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

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐ Contract non-performance did not occur since 1st JANUARY 2018 specified in Section III, Evaluation and Qualification Criteria, Sub-Factor2.1. ☐ Contract(s) not performed since .....*[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)
…… …… .	…….. …….. *[insert amount and percentage]*	…… …… Contract Identification: …… …….. …….. *[indicatecompletecontractname/number,andany other identification]* Name of Procuring Entity: …… Address of Procuring Entity: …… Reason(s) for nonperformance: …… *[indicate main reason(s)]*	…….. …… *[insert amount]*
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3. ☐ Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicatedbelow.			

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

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

4.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name:

…..... Date:

…….

JV Member's Name: NOT APPLICABLE

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

5.4.1. Financial Data

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

*Refer to ITT 15 for the exchange rate

4.4.2 Sources of Finance

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

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

4.4.3 Financial documents

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

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

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

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

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

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

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

4.5 FORM FIN – 3.2:

Average Annual Construction

Turnover Tenderer's Name: _____

Date: _____

JV Member's Name: NOT

APPLICABLE ITT No.37(7) b, iii

and title:

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

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

4.6 FORM FIN – 3.3:

Financial Resources

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

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

4.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

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

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

4.8 FORM EXP - 4 . 1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name: _____

ITT No. and title: _____

Page_____of_____pages

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

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

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management

Experience Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No. and title: _____

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

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

Specific Construction and Contract Management Experience (cont.)

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

4.11 FORM EXP - 4. 2(b)

Construction Experience in Key

Activities Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: *NOT APPLICABLE*

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

ITT No. and title: _____

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

1. Key Activity No One: _

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

[2] If applicable

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

2. Activity No. Two

OTHER FORMS

5. FORM OFTENDER

INSTRUCTIONS TO TENDERERS

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

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

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

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

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

Date of this Tender submission: ..... *[Insertdate(asday,monthandyear)of Tender submission]*

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

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

Alternative No..... [*insertidentification Noifthisisa Tenderforan alternative*] To: COUNTY GOVERNMENT OF WAJIR[*insertcompletenameof Procuring Entity*]

Dear Sirs,

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

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

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

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

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

4. Unless and until a formal Agreement is prepared and executed this tender together with your

written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or anytender you mayreceive.

5. We, the undersigned, further declare that:

i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;

ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and4;

iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Countryin accordance with ITT 19.8;

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

v) *Tender Price:* The total price of our Tender, excludinganydiscounts offered in item 1 above is:

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

Option 2, in case of multiple lots:

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

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

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

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

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

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

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

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

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

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

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

Name of Recipient	Address	Reason	Amount

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

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

xvii) Not Bound to Accept: Weunderstand that youare notbound toaccept the lowestevaluated cost Tender, the Most Advantageous Tenderor anyother Tenderthat you may receive;

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

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

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

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

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

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

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

Name of the person duly authorized to sign the Tender on behalf of the Tenderer: **[*insert complete name of person dulyauthorizedtosign 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*] dayof[*insert month*], [*insert year*]Date signed___dayof__, _____* In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer*

*** Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

Notes

APPENDIX TO FORM OF TENDER

CONDITIONS OF CONTRACT	CLAUSE	AMOUNT
Tender Security		Kshs. 1,000,000.00
Instructions in Writing	2.5	Execution of works under site instructions from Resident Engineer to commence within three (3) days
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	5% (per cent) of Tender Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than Fourteen (14) days after issuance of Order to Commence in the format Prescribed in the Tender Document
Cash flow estimate to be submitted	14.3	Not later than Fourteen (14) days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	1% of the Contract Sum
Period for commencement, from Engineer's order to commence	41.1	14 days
Time for completion –Contract Period	40.1	6 Months
Time for completion for instructed Works	40.1	Three (3) months
Amount of liquidated damages	47.1	0.05% of Contract Sum per day
Limit of liquidated damages	47.1	5% of Contract Sum
Defects Liability period	60.3	3 months
Percentage of Retention	60.3	5% of Interim Payment Certificate
Limit of Retention Money	60.3	5% of Contract Sum
Minimum amount of interim certificates (Instructed Works)	60.2	Kshs 6,000,000.00
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.10	28 days
Appointer of Adjudicator	67.3	The Chartered Institute of Arbitrators (Kenya)
Notice to Employer and Engineer	68.2	The Employers address is: The County Government of Wajir, P.O. Box 9-70200 **WAJIR** The Engineer's address is: Senior Superintending Engineer, P.O. Box 9-70200 **WAJIR** **The Contractor address is:** **Name**…. …… **P.O Box**…….. **City/Town…… ….** **Email……..…** **Telephone……**

A. TENDERER'S ELIGIBILITY- CONFIDENTIALBUSINESS QUESTIONNAIRE

Instruction to Tenderer

Tenderis instructed tocomplete the particularsrequiredinthis Form, *oneformforeachentity if Tender is a JV.*Tenderer is further reminded that it is an offence to give false information on this Form.

(a) Tenderer'sdetails

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

General and Speci**fi**c Details

b) Sole Proprietor, provide the following details.

Name in full NOT APPLICABLE Age Nationality
Country of Origin Citizenship

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) Registered Company, provide the following details.

i) Private or public Company_____

ii) State the nominal and issued capital of the Company_____

Nominal Kenya Shillings (Equivalent).....

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

iv) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

(e) DISCLOSURE OFINTEREST- 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) Con**fl**ict 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.		
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) Certi**fi**cation

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. CERTIFICATEOF 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 authorityto 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 Tenderin 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, anycompetitor;
   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 anycompetitor 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 servicesto which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5)(b) above;

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

Name:……

Title: ……..

Date _____

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

C. SELF - DECLARATION FORMS

FORM SD1

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

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

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

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

   No. ……..

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

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

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

3. THATwhat is deponed to herein above is true to the best of myknowledge, information and belief.

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

   Bidder Official Stamp

FORM SD2

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

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

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

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

2. *(Insert name of the Company)* who is a Bidder in respect of Tender No. ….....……. for … .....*(Insert tender title/description)* for.....*(Insert name of the Procuring entity)* and dulyauthorized and competent to make this statement.

3. THATthe 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 procuringentity.

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

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

6. THATwhat is deponed to herein above is true to the best of myknowledge information and belief.

…… ……...……

. .....(Title)

(Signature) (Date)

Bidder's Official Stamp

DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

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

I do hereby commit to abide bythe provisions of the Code of Ethics for persons participating in Public Procurement and AssetDisposal.

Name of Authorized signatory…….

Sign……..... Position…….

Office address… P. O. Box ……..

Telephone.....E-

mail……

Name of the

Firm/Company…….

Date…….

(Company Seal/ Rubber Stamp where applicable)

Witness

Name ……..

Sign..... Date……

D. APPENDIX 1- FRAUDAND CORRUPTION

4. Purpose

5. 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.

6. Requirements

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

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

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
3) Without limiting the generalityof the subsection (1) and (2), the person shall be: -
   a) disqualified from enteringinto a contract for a procurement or asset disposal proceeding; or
   b) if a contract has alreadybeen 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 procuringentitymayhave;
5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
   a) shall not take part in the procurement proceedings;
   b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of thisAct.
6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuringentity;
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 entityshall bemade good bytheawardingofficer. Etc.

n 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 anobligation;

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

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

v) "obstructive practice"is:

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

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

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

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

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

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

f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a "Self-Declaration Form" as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will notengage inanycorruptorfraudulent 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 directlyorasanominatedsub-contractor, nominatedconsultant,nominatedmanufacturerorsupplier,or nominatedserviceprovider,inrespectofsuchcontract,and(ii) enteringintoanaddendumoramendment introducing a material modification to anyexisting 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 specificmattersrelated to investigations/audits, such as evaluatingtheveracity of anallegation 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 asrelevant; accessingandexaminginanyotherdocuments, dataandinformation (whetherinhard 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 sitevisits; and obtaining third party verification of information.*

FORM OF TENDER SECURITY - DEMAND BANK GUARANTEE

Beneficiary: NOT APPLICABLE

Request for Tenders No: _____ Date: ____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution of _____

2. Under Request for Tenders No. _____ ("the ITT").

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

4. 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 thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.

5. 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.

6. 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)]

FORM OF TENDER SECURITY (TENDER BOND)

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

BOND NO. _____

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

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

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

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

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

5. IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this _____dayof_____20_.

Principal: _____ Surety _____
Corporate Seal (where appropriate) :

_____

(Signature) **(Signature)**

(Printed name andtitle) *(Printed nameandtitle)*

TENDER-SECURING DECLARATION FORM

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

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

I/We, the undersigned, declare that:

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

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

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

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

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

…….…….....…….

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

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

of Tenderer]

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

Appendix to Tender

Schedule of Currency requirements

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

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

TECHNICAL 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 works.

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

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

Period (Months)	**Cost of Construction Works**	**Net Payments to be received**	**Net Cash Flow**
1-2			
3-4			
5-6			
7-8			
ETC.			

TECHNICAL 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

TECHNICAL SCHEDULE C

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 construction Works and rehabilitations 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).

PART 2 – WORKS REQUIREMENTS

SECTION V: SPECIFICATIONS ON INSTRUCTED WORKS

SPECIFICATIONS Notes for

preparing Specifications

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

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

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

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

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

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

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

SECTION VI –A: STANDARD SPECIFICATIONS

Standard Specifications refers to the Standard Specifications for Roads and Bridge Construction, Published by the Ministry of Transport and Communications of the Republic of Kenya, 1986 Edition and shall be applicable in this contract.

101 General

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

102
and Extent of Site

The road Section Where box culverts is to be constructed is at adamasjida town

102.1 Extent of Contract

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

- General preliminaries
- Site clearance
- Earthworks
- Excavation And Filling for structures
- Passage Of traffic
- Grading and Gravelling Works
- Major Concrete works – Construction of 4 cells 5X2m box culverts as instructed by the Engineer.
- Road furniture

103 Drawings

This clause shall be read as under:

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

104 Programme for Execution of the Works

The Contractor shall provide the works programme, required under Clause 14.1 of the Conditions of Contract, within 28 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 Works of the Contract in accordance with the programme agreed with the Engineer, but he shall in no manner be relieved by the Engineer's approval of the programme, of his obligation to complete the works in the prescribed order and by the prescribed completion date and he shall from time to time review his progress and make such amendments to his rate of execution of the works as may be necessary to fulfil his obligations.

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

105 Order of Execution of the 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.
Generally, the Contractor shall commence the works at the beginning of the road package and progress continuously towards the other end without leaving any isolated section or sections of road uncompleted.

107 Certificate of Completion

Wherever the "Certificate of completion" and "Period of Maintenance" are stated in the specification, these shall be read respectively as the "Taking Over Certificate" and "Defects Liability Period".

The Taking-Over Certificate for these works shall be issued upon application by the Contractor under Clause 48.2 of the Conditions of Contract on substantial completion of the construction works. The Defect Liability Certificate will be issued after the end of the Defects Liability Period.

Release of Retention Money will be on issuance of the said certificates.

108 Method of construction

Add the following to this clause:

The submissions of work programme, Order of Work and the General Description of works shall be consistent in presentation and content when handed over for the Engineer's approval and in

accordance with programmes and schedules as stated in Clause 14.1 of Conditions of Contract.

Notwithstanding any contrary provision contained in the last paragraph of Clause 108 of the Standard Specification, the Engineer's normal working hours shall be defined as 8:00 a.m. to 5:00 p.m. on weekdays, including lunch break from 1.00 p.m. to 2.00 p.m. and 8:00 a.m. to 1:00 p.m. on Saturdays, with Sunday being set aside as a day of rest. If the contractor wishes to execute permanent works outside these hours, he shall request for and obtain written permission from the Engineer at least one full working day in advance to enable the Engineer to make necessary provision for the supervision of such work. The contractor shall meet any costs arising thereof.

109 Notice of Operations

Name the existing text as 109.1 and add the following:

109.2 Notification Terms

It shall be the Contractor's responsibility to notify the Engineer when any items of the Works scheduled are completed and ready for approval, and the contractor shall give a notice of one full working day to allow control tests to be performed.

117 Health, Safety and Accidents

Insert Sub-clause (i):

In accordance with the laws of Kenya, the Contractor shall make arrangement for awareness programme for public health education and particularly for HIV/AIDS as detailed under Section 26 of this specification.

119 Use of Explosives

Add the following to Clause 119:

The Contractor shall not use explosives without prior written consent of the Engineer. Where the use of explosives is so provided or ordered or authorised, the Contractor shall comply with the requirements of the following beside the law of the land as applicable:

(a) The Contractor shall at all times make full liaison with and inform well in advance and obtain such permission as is required from all Government Authorities, public bodies and private parties whatsoever concerned or affected or likely to be concerned or affected by blasting operations.

(b) The Contractor shall pay all license fees and charges, which may be, required for storage of explosives or in respect of any other matters whatsoever.

(c) The contractor shall be solely responsible for provision, supply, handling, storage and transportation of all explosive ancillary materials and stores and all other things of every kind whatsoever required for blasting operations and shall not delegate or subcontract these activities without the approval of Engineer.

(d) Before the beginning of the Defects Liability Period the Contractor shall remove all unused explosives from the site on completion of the Works or which are ordered by the Engineer, and submit to the Engineer written confirmation of compliance with the instruction.

(e) The Contractor shall submit to the Engineer monthly returns detailing the quantity of explosives brought to the site together with the quantities used during the month and the location and quantity of rock blasted.

120 Protections of Existing Works and Services

Add the following to this Clause:

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 tender rates by the Contractor.

Any damage to, or interference with, existing utilities, caused by the Contractor's operations during the progress of the Works, shall be deemed to be the responsibility of the Contractor who shall undertake to make good at his own expense any damage so caused to the existing underground utilities or other features. The Contractor shall be liable in respect of all claims arising from such damages or interference that may occur.

The Contractor shall be responsible for arranging in liaison with the relevant authorities as soon as the requirements are known for the moving of or alterations to services including power lines, telephone lines, data cables, water mains, sewers and surface water drains which are affected by the works. The arrangements for such moving or alteration shall be subject to the agreement of the Engineer and the relevant authorities.

121 Diversion of services

Add the following to the existing text:

(a) The Contractor shall acquaint himself with the position of all existing services including sewers, water pipes, underground drains, cable for electricity and telephone lines, telephone and lighting poles before commencing any excavation or other work likely to affect these existing services.

(b) The Contractor shall pay any charges arising from the moving of such services for which Provisional Sums have been included in the Bill of Quantities. Subject to the agreement of the Engineer and upon production of receipts, the Contractor shall be reimbursed in Interim Certificates the net cost of such moving or alteration plus the percentage inserted in the Bill of Quantities for all costs and profits in making the payments.

(c) The Contractor shall be entirely responsible for and shall repair at his own cost, any services that may be damaged by his plant, equipment or personnel for not following the laid down procedure of locating and shifting services or damage that may occur subsequent to alteration of such services. The Contractor shall indemnify the Employer against claims arising from damages to existing services or works.

123 Liaison with Government Officials and Police

Add the following to the existing text:

In addition to the requirements of maintaining liaison with Government Officials and Police, the Contractor shall be responsible for acquainting himself with all current and valid ordinances or regulations which may affect the work.

The Contractor's attention is also drawn to his obligations with regard to inspection and examination of the site as stipulated under Clause 11 of the Conditions of Contract.

124 Provision of land

Notwithstanding the provisions of Clause 124 of the Standard Specification, all requirements of land for deviations, quarries, stockpiles, spoil areas and borrow pits when not in the road reserve but required for the construction purposes shall be approved by the Engineer, but the Contractor will make necessary arrangements with the property owners concerned and pay all charges arising thereof on or before completion of the Contract. However, the Employer shall not provide any land for the

Quarries, stockpiles, spoil areas and borrow pits and access roads there to.

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 is reasonable and practicable. No separate payment shall be made to the Contractor on account of these items and the contractor shall make due allowances for them in his rates elsewhere.

Any encroachment of the road reserve, for example by kiosks, shall be brought to the Engineer's attention by the Contractor at the earliest opportunity.

125 Water Supply

Add the following to this clause:

The Contractor at his own cost shall obtain necessary permissions from both relevant Government authorities and private parties to draw water from natural sources and private sources respectively.

127 Information from Exploratory Boring and Test Pits

Delete the contents of Clause 127 and substitute with the following:

(a) The Materials Report prepared by the Employer does not form part of the bid documents. However, the report will be made available for the Contractor's verification only and any conclusions in regard to suitability of material, location of borrow pits and material quantities made by the Contractor based on this information, will be his own responsibility.

(b) The Contractor shall allow in his programme for construction of trial sections and carrying out tests upon them as directed by the Engineer. Trials would normally be required at the start of each pavement layer and if change of method or equipment deems it necessary as directed by the Engineer. The time for completion of the Contract shall not be extended because of the time needed to construct trial sections and evaluate the test on them.

At least fourteen (14) days before the work of laying any pavement layer is commenced the Contractor shall construct a trial at least 100 m in length and to the full construction width and shall be laid to the specified depth for the material. For each trial the contractor shall use the materials m ix proportions, mixing laying, compaction plants and construction procedure that he proposes to use for the main work. The main work of laying the pavement layer shall not be commenced until this trial has been tested and approved by the engineer.

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

131 Signboards

Add the following to this clause:

At the commencement of works, the Contractor shall provide and erect three signboards; one on each end of the proposed Project Roads and as instructed by the Engineer. The signboards shall comply with the requirements and detail shown in the Book of Drawings. Any amendments to the details in the Book of Drawings, prior to the signboards being erected, shall be with the approval of the Engineer.

300 SETTING OUT AND TOLERANCES

301 Setting Out

(a) General

If traverse points to be used for setting out are close to the existing carriageway and interfere with the construction works, the Contractor shall relocate them to a location where they will not be disturbed. The coordinates and heights of all transverse points so relocated shall be listed and provided to the Engineer for checking and/or approval. The Contractor shall also reference with monuments the new road centrelines every 200 m long straight sections and at all salient points along curves, consisting of a pin in a concrete beacon, before commencement of any works.

The roads reserve boundary posts shall have 12 mm diameter steel pins, 200 mm long embedded in concrete with 25 mm exposed and sticking from the top surface. This pin shall be coordinated and heightened and details of the same shall be provided to the Engineer for approval.

(b) Detailed setting out

Reference pegs shall be 50 mm x 50 mm in cross section, 600 mm long driven 400 mm firmly into the ground and painted white above ground level. The offset from the centreline shall be indicated by a small nail, 20-25 mm long, with its head driven flush with the top of the peg. Chainages, chainage offsets and reference elevation shall be clearly marked on the sides of the peg to the satisfaction of the Engineer.

400 SITE CLEARANCE AND TOP SOIL STRIPPING

401 Site Clearance

Add the following as the last paragraph of Sub-clause (a).

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

The Contractor shall take care not to uproot or damage trees which are within the road reserve but outside the construction width. After the contractor has staked out the extent of the road, the Engineer with assistance of the Contractor shall mark out the trees to be removed. After removal the trunk and branches of these trees shall be cut into pieces not more than 2.0 m in length, transported and neatly stored at the nearest Ministry of Roads camp at a position to be indicated by the Engineer. Payment for this work shall be as detailed in the Bill of Quantities. The rate inserted by the Contractor for this work shall include the cost of complying with all the requirements of this clause.

500 EARTHWORKS

502 General

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

502.2 Definitions for Earthworks

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

504 Preparation Prior to Forming Embankments

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

Benching

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

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

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

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

Ground Compaction

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

505 Construction of Embankments

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

Material containing more than 5% by weight of organic matter, such as topsoil , humus, material from swamps, mud ,log stumps and perishable material
Material with a swell of more than 3%
Clay with a liquid limit exceeding 50%
Material having moisture content greater than 105% of optimum moisture content (standard compaction) in its naturally occurring state.

Material for sub-grade shall meet the following requirements:

CBR of not less than 15% measured after 4 day soak on a laboratory mix compacted to a dry density of 100% MDD(T99)
Swell less than 1% on the laboratory mix sample

Maximum dry Density (MDD) not less than 1500 kg/m^2.

Add the following:

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

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

507.2 Rockfill in Carriageway, Embankment and Behind Structures

(a) Scope of Application

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

Where the height of embankment is more than 3 m, including formation level, the lowest 1.0 m thickness can be constructed using rockfill.

For all heights, the sloped portion beyond shoulder can be constructed using with provision that, under all circumstances, a minimum of 500 mm thick earthen cushion shall be available between formation level and top level of rockfill.

Behind the structures irrespective of the height of embankment up to the bottom of sub-grade.

(b) Material

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

(c) Spreading and Compaction

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

(d) Rates

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

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

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

conditions or the rains.

(e) Settlement Monitoring

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

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

508 Compaction of Earthworks

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

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

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

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

509 Mass Haul Diagram

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

511 Borrow Pits

Delete the first paragraph and substitute with the following;

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

514 Top Soiling and Grassing

Consider the existing text to be Sub-clause 514.1

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

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

Add the following Sub-clause 514.2

Hydro-seeding

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

The Engineer and the Contractor shall agree the types and mixtures of seeds to be used on before the Contractor orders any seed he may wish to use. The variety of resulting grass or plants should not be attractive to livestock or grass eating animals.
The Contractor shall be solely responsible for establishing an acceptable grass cover and any approval by the Engineer of seed or seed mixtures intended for use by the Contractor shall not relieve him of this responsibility. All areas to be hydro-seeded or hand seeded shall be scarified forming horizontal drills running parallel to the contours. The drills are to be spaced at intervals of 150 to 250 mm apart. Seeding to Mulch shall be added to the hydro-seeding mix at an approved rate.

Hydro-seeding shall be carried out with an approved hydro-seeding machine at a rate of application of not less than 20 gm/m^2 for fill and cut slopes and 10 gm/m^2 for other areas. When the use of anti-erosion compounds is required and such compound is to be applied simultaneously with the hydro-seeding, it shall be mixed with the hydro-seeding mixture before application.

Application of Chemical Fertilizers

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

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

515 Side drains

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

517 Measurement and payment

(a) Fill in soft material

Add the following at the end of this item:

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

(c) Spoil in soft material

Add the following at the end of this Item:

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

Add the following:

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

Unit: Kilogramme (kg)

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

(o) Item: Hydro-seeding

Unit: Hectare (ha)

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

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

600 QUARRIES, BORROW PITS, STOCKPILE AND SPOIL AREAS

601 General

The Employer will not make available to the Contractor any land for quarries, borrow pits, stockpile and spoil areas, except for those in the road reserves and specifically approved by the Engineer.

The Contractor will be entirely responsible for locating and providing suitable sources of materials complying with the specifications and for procurement, winning, haulage to site of these materials, rehabilitating the borrow pits, quarries, stockpile and spoil areas, and all costs involved therein. Similarly, the Contractor will be responsible for provision of areas for stock piling materials and disposal of spoil dumps or stockpiling within the road reserve. The Contractor may utilize them subject to the approval of the Engineer.

No additional payment will be made to the Contractor to cover costs arising from the requirement of this clause. The Contractor shall include the costs of complying with this clause in the rates and prices inserted elsewhere in the Bill Of Quantities.

602 Definitions

Add the following to Clause 602:

(d) Materials Report

The information on possible material sites is given for the general guidance of bidders. However, bidders are advised to conduct their own investigation as the information contained therein is neither guaranteed nor warranted.

700 EXCAVATION AND FILLING FOR STRUCTURES

703 Excavation of foundations for structures

Make amendments to this clause as follows

Read the second paragraph as “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%".

Add the following to this clause:

703.1 Preparation of Foundation and Approval

(a) Preparation of Foundation

The bottom of foundations shall be levelled both longitudinally and transversely or stepped as directed by the Engineer. Where the material met with is other than rock, the same shall be compacted to at least 95% MDD. Where rock and soil are met with in part widths, the area in the soil portion shall be sub-excavated to a depth of 100 mm and backfilled with Class 15/20 concrete. All rock faces shall be freed of soft and loose material, cleared and cut to a firm surface, level, stepped or serrated as directed by the Engineer. All seams shall be cleared out and filled with cement mortar, to the satisfaction of the Engineer.

(b) Approval of Foundation

After excavation in each location is completed, the Contractor shall notify the Engineer, and no foundation concrete shall be placed until the Engineer has approved the depth of the excavation and the character of the foundation material.

703a Erosion Protection Works at Upstream and Downstream of Culverts/Bridges

703a.1 Scope

The work shall consist of provision of erosion protection works in the form of bed flooring and curtain or cut-off walls at the upstream and downstream ends of the new as well as the existing box/pipe culverts. The work shall be carried out to such designs and at such locations as indicated on the Drawings or as directed by the Engineer.

The erosion protection works shall consist of dry rubble stone bed flooring and random rubble masonry curtain (cut-off) wall at the upstream and downstream ends of box/pipe culverts.

703a.2 Materials

The material for bed flooring shall be dry rubble stone, each stone weighing not less than 40 kg.

The curtain wall shall be constructed of random rubble masonry in cement mortar of 1:3.

703a.3 Construction Operations

(a) Curtain Wall

The trench for the curtain wall shall be excavated as per Clause 703 of the Standard Specification at such locations and to such depths shown on the Drawings or as directed by the Engineer. After preparing the foundation bed, the curtain wall shall be constructed to the thickness shown on the Drawings and to levels up to top of the bed flooring.

(b) Floor Paving

The bed for the flooring shall be prepared by excavation in accordance with Clause 703 of the Standard Specification or filling in accordance with Clause 707 of the same specification, levelled and compacted to at least 98% MDD. The top of bed shall be prepared to such levels that after construction of the bed flooring, it is in line with the invert of the culvert barrel and sloping away. The bed flooring shall end before the curtain wall.

707 Backfilling of Excavations and Filling for structures

Make amendments to this clause as follows

Delete “95% where ever it appears and insert “100%”.

708 Protection of Structures

Add the following to Clause 708.

Unless specific provisions for any structure in respect of cofferdams has been made in the Bill of Quantities, no payment will be made for the erection, maintenance and removal of cofferdams and the Contractor’s rates shall be deemed to be all inclusive.

709 Excavations for River Training and New Watercourses

Add the following to Clause 709:

For culvert widening the Contractor shall inspect the structures to be widened and allow for any river training works he deems necessary in his rates for excavation.

710 Stone Pitching

Add the following to Clause 710:

Stone pitching to drains, inlets and outlets of culverts to embankments and around structures shall consist of sound un-weathered rock approved by the Engineer.

All stone for pitching shall be capable of withstanding a crushing stress of 20 N/mm² when soaked. The source of stone shall be free from overburden, mudstone, cracks, sand holes, veins, laminations or other imperfections as may be identified by the Engineer during the approval process.

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

800 CULVERT AND DRAINAGE WORKS

804 Excavation for Culverts and Drainage Works

In the Standard Specification make the following amendments on this clause:

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

805 Excavation in Hard Material

In the Standard Specification, sub-clause 805 (a) and (b) delete reference to "95%" and insert "100%".

809 Bedding and Laying of Pipe Culverts

In the Standard Specification, sub-clause 809 (a), delete reference to "95%" and insert "100%".

Add the following to Clause 809:

(d) Laying, Bedding and Surround for Culverts Cast In-situ

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

All concrete used for surround and the top 50 mm or 80 mm of bedding for culverts shall be Class 30/20 while the rest of the concrete shall be class 20/20.

The inner concrete barrel surface immediately in contact with the inflated balloon form during placing shall achieve Class F3 finish.

Cement to be used shall be cement 42.5

810 Jointing Concrete Pipes

In addition to the requirement of Clause 810 of the Standard Specification, all precast concrete pipes shall be ogee jointed pipes laid with a 1:2 (cement: sand) mortar and provided with fillets on the outside and as described in the Standard Specification.

812 Backfill

In the Standard Specification make the following amendments to this clause:

Wherever the expression "dry density of 95% (AASHTO T99)" occurs, this expression shall be deleted and replaced with "dry density of 100% (AASHTO T99)".

Delete paragraph 6: "For pipes culverts…depth of 150 mm", entirely.

816 Minor Drainage Structures

Add the following to this clause:

Concrete Lined Drains

The exposed surfaces of concrete lined drains shall be a class UF2 finish. Concrete lined drains shall be constructed to the same standard as the minor drainage structures.

Cast in situ chutes on side slopes

Where pre cast chutes are provided, refer to Section 1 of this the specifications.

817 Mitre Drains, Cut-off Drains, Catch Water/Drains, Outfall Drains and Earth Dams

Rename the existing text as 817.1 and add the following sub-clauses:

Cleaning Existing Drains

Where instructed by the Engineer, the Contractor shall clear blocked side drains and/or outfall drains to a free flowing condition. The work shall consist of but not be limited to:

Stripping and removal of extraneous material including vegetation and roots to spoil
Carting away and spreading any spoil to the satisfaction of the Engineer, and
Reshaping the drains to a free flowing profile.

Cleaning of Hydraulic Structures

Where instructed by the Engineer, the Contractor shall clean the existing hydraulic structures by removing all undesirable material in the structures to ensure they are clean and free flowing. The Contractor shall dispose of all the silt and other undesirable material to spoil. After the cleaning out of structures, the Contractor shall be responsible for maintaining the hydraulic structures in a clean condition for the duration of the Contract.

Removal of Existing Pipes, Inlet and Outlet Structures

The Contractor shall remove existing concrete pipes where instructed by the Engineer including bedding, surround, inlet and outlet structures. Concrete shall be disposed of as directed by the Engineer. Masonry structures where in a good condition shall be preserved to reuse as may be directed by the Engineer. Additional material shall be added to the void left after removal of these pipes and structures and shall be carefully compacted to 100% MDD (T99). The void shall then be preserved for placement of any new pipes or construction of new structures.

The existing inlet and outlets structures, where in good condition, and reusable as beds to pipe extensions, shall not be removed. Any such structures removed without the Engineer's approval shall be restored to the original condition at the Contractor's expense.

Extension of Existing Pipes

Where shown on the drawings or instructed by the Engineer, the Contractor shall extend the existing concrete pipes. Part of the existing pipe surround shall be broken and concrete collar constructed as shown on the drawings. The extension shall be backfilled to the same standards as for new pipes.

Chute drain for High Embankment Sections

(a) Scope

This work shall consist of construction of chute drain on the slope of the road embankment including erosion protection works at the locations and to dimensions shown on the Drawings or as directed by Engineer. The schedule of works shall be so arranged that the drains are completed in proper sequence with roadway to ensure that no damage is caused due to lack of drainage.

(b) Materials

The drains shall be of half round pipe of 600 mm dia. formed by joining pre-cast semicircular RCC sections at site as shown in the drawings. The RCC work shall conform to the relevant clauses of these specifications.

The toe wall below ground level shall be of brick masonry in cement mortar 1:4 or plain cement concrete of class 15/20, as shown on the Drawings.

Dumped riprap for erosion protection at ground level shall be hard, unweathered and durable rubble stone of size 150 mm to 250 mm.

(c) Construction Operations

Excavation for fixing drain sections at the locations where the chute drains are to be installed, a semi-circular cut on the side slope of the embankment along the line of the chute drain shall be made in such a way that the RCC drain sections could be fixed snugly with their edges flush with the adjoining embankment slope. The sloping bed of the drain shall be to a regular line and suitably compacted to provide a firm bed.

Stone Masonry and Concrete Paving

(a) Description

The work shall consist of construction of lined ditches, stone paved shoulders, hard strips, chutes, toe walls, retaining walls, slab culvert walls, head walls, wing walls, aprons and slope protection works using natural stones for stone related masonry and precast concrete blocks for concrete block masonry set in cement mortar.

(b) Materials

(i) Stones

Stones used shall be hard and durable without weak seams or cracks and of rectangular shape. The Los Angeles Abrasion Value shall not exceed 50. The apparent specific gravity shall not be less than 2.2 and water absorption when tested in accordance with AASHTO T85 shall not exceed 5 percent.

(ii) Concrete Blocks

Concrete blocks for concrete block masonry shall be precast from Class 20/20 concrete while those used for paving shall be in Class 25/20 concrete. The blocks shall, in general, have the length, width and height in the proportion of 3:1.5:1 or as ordered by the Engineer. The blocks shall be moist cured for at least 7 days, and kept under cover for another 21 days in the casting bed before being lifted for use in the works. The blocks when tested flat after 28 days of casting shall have a compressive strength not less than 125 percent of the cylindrical compressive strength specified for the class of concrete used.

(iii) Mortar

The mortar shall be made of a mixture of cement and sand in the proportion of one cement to three sand. Cement shall be Portland cement conforming to AASHTO M85, Type I or II. The sand shall be crushed stone or natural sand or a combination thereof conforming to AASHTO M45. Water added shall be just adequate for making a workable mix and shall be subject to the approval of the Engineer.

(c) Construction Requirements

(i) Stone Masonry

The stone masonry shall be used for walls of different types above the ground level. The stones shall be of regular shape with length of any stone not exceeding 3 times its height, with the breadth on the bed not less than 150 mm nor greater than three quarters of the thickness of the wall. Unless otherwise directed, the stone shall have thickness not less than 150 mm.

All stone possessing bedding planes shall be laid with its natural bed as nearly as possible at right angles to the direction of the load, and in case of arch rings, the natural bed shall be radial.

Each course shall present a uniform horizontal line of more or less equal height. Vertical joints shall be broken by the adjoining courses. All joints shall be sufficiently thick to prevent stone to stone contact and shall be completely filled with mortar. On the exposed face no part of the masonry shall deviate from the general line of the wall by more than 20 mm.

Walls of stone masonry shall be provided with weep holes as shown on the Drawings or directed by the Engineer. In continuous long structures, expansion joints shall be formed as shown on the Drawings subject to a minimum spacing of 10 m.

All face joints shall be finished almost flush with the surface of the work without covering the stones. The top surface of all walls shall be provided with 20 mm thick cement mortar coping with a crossfall for shedding rainwater.

Newly laid masonry shall be protected against the harmful effects of weather and cured for a minimum period of 4 days. All visible surfaces of the masonry shall be clean and free from mortar stains and other blemishes.

Backfill behind the stone masonry walls shall be placed only after the masonry work has been in place for at least 14 days or as directed by the Engineer.

(ii) Grouted Stone Riprap

This type of masonry that is constructed in a single layer over a bed of mortar shall be used for shoulder paving, hard strips, aprons, drainage chutes, lined ditches and slope protection. The stone shall be of regular shape and uniform thickness. Prior to laying of the stone, the base shall be brought to regular shape and levels, watered and well compacted. Where this type of masonry is to be used for paving shoulders or for carriageway widening of the existing roads, the base shall be slightly loosened, watered and compacted to 95% MDD prior to application of the riprap. The stone shall be placed over a bed of mortar about 20 mm thick. After placement of the stones by hand, all the joints shall be completely filled with cement mortar. The finished work shall present a uniform surface with no point deviating from the general line by more than 10 mm in the case of shoulder paving, and hard strips, and not more than 25 mm in other cases. The finished work shall be protected against the adverse effects of weather and cured for at least 4 days.

(iii) Dry Stone Riprap

This work shall consist of placing 150 mm to 300 mm size rubble stone on the front side of cut-off walls of culverts and Irish Crossings as erosion protection measure. The dimensions of the riprap construction shall be as shown on the drawings or as directed by the Engineer. The stone used shall be of hard and durable type as are used for stone/boulder masonry. The stone shall be so placed that major hollow spaces are avoided.

(d) Measurement and Payment

(i) Stone Masonry

The quantity to be paid will be measured by volume in m^3 of stone masonry complete in place and accepted. In computing the volume for payment, the dimensions used will be limited to those shown on the Drawings or ordered in writing by the Engineer.

No deductions will be made for weep holes, drainpipe or other openings of less than 0.2 m^2 in the area. The cement mortar coping on top of the wall shall be included in the measurement for stone masonry.

If the masonry is for heightening or lengthening an existing wall, the work of removing the plaster, if any, on the old wall including roughening of the surface to effect good bonding shall be considered incidental to the work and shall not be paid for separately.

The quantities of excavation below ground level and backfilling will be measured as structural excavation.

(ii) Grouted Stone and Dry Stone Riprap

Grouted Stone Riprap shall be measured by m^2 of completed and accepted work placed to the specific thickness. Measurement shall be limited to the dimensions shown on the Drawings or as otherwise authorised by the Engineer. No measurement shall be made of unauthorised areas or for extra thickness. Toe walls and cut-off walls below ground level shall be measured in m^3 and paid for as Boulder Masonry.

Where the rip-rap is used for shoulder paving or for widening carriageway of existing road, the bed preparation shall be measured as sub-grade preparation in accordance with Clause 508 of the Standard Specification. In all the other cases, slope and bed preparation shall not be measured for payment but will be considered subsidiary to the pay item.

Dry Stone Riprap shall be measured as placed in position in m^3. Any excavation for making space for placing the riprap shall be measured as common excavation in accordance to Clauses 504 and 505 of the Standard Specification.

(iii) Payment

The amount of completed and accepted work as measured will be paid for at the bid unit prices per m^3 for “Stone Masonry”, “Dry Stone Riprap” and “Grouted stone riprap”, used for shoulder paving, hard strips, ditch lining, aprons, drainage chutes and slope paving. These

prices shall be in full compensation for furnishing and placing all materials, and for all labour, equipment, tools and incidentals necessary for completion of the work complying with the specifications.

Add the following to Clause 819 of the Standard Specification:
819.1 Repair of Drainage Spouts
The repair of drainage spouts shall be made by cleaning of the existing drainage pipes of all muck and replacing the broken pipes or by providing new drainage spouts in cases where the same have not been provided.

(a) Materials

Ordinary Portland cement KS 1825
Aggregates conforming to BS 5328
GI Pipes
Paint.

(b) Equipment

Welding equipment
Painting brushes
Miscellaneous construction equipment

(c) Procedure

The existing drainage spouts shall be cleaned of all muck. The new GI drainage spouts shall then be replaced for the damaged spouts as per the detailed drawings.

In case where drainage spouts have not been provided, the RCC kerb shall be cast after fixing new pipes as per the detailed drawings. The casting of concrete and fixing of pipes shall be made as per the standard practice.

The GI drainage spouts shall be painted with black anticorrosive paint of approved brand and manufacture to give an even shade.

The existing reinforcement shall be realigned and additional reinforcement shall be provided as per the drawings or as directed by the Engineer.

Concrete shall be mixed and laid as per the standard practice and as per the drawings. For bonding old concrete with the new concrete, the old concrete surface shall be painted with epoxy bonding agent or polymer cement slurry before the concreting is cast.

820 Measurement and Payments for Additional Items
(a) Item: Concrete for top 50 mm or 80 mm bedding and surround for culverts cast in situ.

Unit: m^3

The rate for concrete for each size of culverts instructed shall include for the cubic metre of

the top 50 mm or 80 mm of concrete for bedding and surrounds, as instructed, calculated from the dimensions on the drawings or as directed by the Engineer.

The rate for concrete for bedding and surrounds for culverts cast in situ shall include for the cost of providing and placing the concrete and complying with Clauses 809, 810, 814, 819 and 1713 of the Standard Specification.

No extra payment shall be made for provision of inflatable forms and other requirements for casting culverts in-situ and the Contractor shall be deemed to have provided for these in his rates.

(b) Item: Cleaning and grading the existing outfall and metre drains

Unit: m^3

Cleaning the existing drains shall be measured by the volume instructed. The volume shall be the product of the cross sectional area of the material to be removed from the drain and the length instructed.

(c) Item: Removal of material from existing side drains

Unit: m^3

Cleaning of the existing drains shall be measured by the volume instructed. The volume shall be the product of the cross sectional area of the drain to be cleaned and the length instructed. Payment will not be made under this item where the material can be removed in conjunction with bulk earthworks.

(d) Item: Removal of the existing pipes

Unit: m^3

Removal of the existing pipes shall be measured by the length of culvert removed. It shall include for breaking out where necessary and carting of the removed culvert and surrounds to spoil or stockpile as shall be directed by the Engineer. It shall also include all the costs of complying with the requirements of Clause 817.3.

(v) Item: Demolition of inlet and outlet structures

Unit: m^3 of concrete or masonry

Demolition of inlet and outlet structures shall be measured by the volume of concrete or of masonry structures demolished. There will be no distinction between reinforced and un-reinforced concrete structures. The rate shall include for disposal of concrete and reuse of masonry as directed by the Engineer. Stone pitching shall not be measured separately and where it is to be removed shall be treated as normal site clearance.

(w) Item: Cleaning the existing hydraulic structures

Unit: m³

Cleaning of the existing hydraulic structures shall be measured by the volume of material removed. The rate shall include for the cost of removing all undesirable material, transporting and disposing off as well as the additional costs of gaining access to the structures as specified and maintaining the structures in a clean condition.

(x) Item: Concrete collar

Unit m³

Reinforced concrete collars shall be measured by the volume of concrete placed as shown on the drawings or instructed by the Engineer.
Where the existing culvert which is to be extended has a concrete surround, the rate shall also include for removal of this surround for the length of the collar to be placed around the existing culvert.
In all cases the rate shall also include for excavation below the culvert and the preparation and compaction of the in situ material to form a bed for the collar.

821 Cement Mortared Stone Masonry Walls

Masonry walling shall be constructed with sound clean stone with a minimum width of 200 mm. The stone shall have a fair finish. The stone shall be individually placed to break joint and to provide a minimum of voids. The stone shall be wetted and jointed in a 3:1 (sand: cement) mortar. Exposed stone on the wall faces shall be cleaned of mortar by washing or wire brushing. The mortar shall be flush pointed to the approval of the engineer.
Weep holes shall be provided as instructed and shall be cleaned of mortar and any other clogging material that may have entered during construction.

The walling shall be protected from the weather and kept moist for a minimum of seven (7) days after completion.

822 Subsoil Filter Drains

The Contractor shall lay subsoil filter drains where shown on the drawings or instructed by the Engineer. The drain shall extend to the underside of the sub-grade or sub-base and shall consist of a perforated pipe wrapped in geotextile fabric as specified in the Standard Specifications and shown on the drawings. The pipe and fabric shall be laid on and backfilled with granular filter materials. The granular material shall comply with the requirements given in the table below.

BS Sieve Size (mm)	Percentage by mass Passing Sieve	
	Minimum	Maximum
37.5	100	100
20	85	100
10	50	100
5	35	90
1.18	15	50
0.600	5	35

0.150	0	5

823 Gulley Pots and Chambers

Where shown on the drawings or instructed by the Engineer, the existing roadside gulleys and gulley pots shall be adjusted before laying final wearing course such that there are no depressions around man holes, gulleys or chambers. The beds, frames and haunches shall be adjusted with concrete Class 20/20 true to line and level and to the satisfaction of Engineer.

824 Pedestrian Crossings

Where shown on the drawings or instructed by the Engineer, the Contractor shall construct pedestrian crossings across open drains. The crossing will be 2 m wide, with culverts located as directed by the Engineer. The pedestrian crossing shall be finished to the same standards as the adjacent footpath. Where there is no footpath, the crossing shall be finished with approach path comprising 150 mm gravel base with surface dressing similar to the adjacent shoulder as directed by the Engineer.

825 Measurement and Payment for Further Additional Items

(a) Item: Preparation of bed for concrete lined open drains

Unit: m^2

The unit of measurements shall be the square metre of excavation trimmed to receive concrete lining. The rate shall include for all the excavation below the finished line of the drain, providing and laying of gravel bed, and compacting and shaping to the line and level required to receive the concrete lining.

(b) Item: Cast in situ concrete chutes

Unit: m^3

Cast in situ shall be read as “Pre-cast”. Pre Cast concrete chutes shall be measured by the volume of concrete cast. The rate shall include for preparation of sides, laying, fixing and for complying with the requirements of Sections 8 and 17 of the Standard Specification.

826 Concrete and Cement Strength

Concrete class shall be as specified. Cement to be used in all construction works shall be 42.5 KN.

900 PASSAGE OF TRAFFIC
903 Maintenance of Existing Road
Amend as follows:

The Engineer shall hand over the existing road to the contractor, in sections, at the commencement of the Contract for construction purpose. However, the Contractor shall be responsible for all repairs and maintenance of the entire road package for the duration of the Contract. The existing road is bituminous and the Contractor shall maintain it with asphalt materials or other materials similar to those of the existing pavement layers. The Contractor shall regularly inspect the road and carry out such repairs and maintenance to the satisfaction of the Engineer. If at any time the Engineer draws the Contractor's attention to a road section which requires maintenance the Contractor shall promptly repair the section. The Contractor shall be legally responsible for any accident or damage attributable to his failure to maintain the road.

Add the following to this clause:
903.1 Maintenance of Right of Way
Throughout the period of the Contract the Contractor shall at all times maintain public vehicular access to the right of way, within the right of way and from the right of way to all public and private land, as it was immediately prior to his commencement of the Works.

The Contractor may, on submission of written request to the Engineer, including a drawing, programme and specification, be given approval to operate:

(a) A road diversion suitable for the road traffic and suitable width or

(b) Traffic on a one way system using manual coordinated direction control or automatic traffic lights having a secure source of power.

Applications for approval shall show every detail of the proposals including road construction cross section including pavement, surfacing, profile and drainage, road signing, communication between the ends of the controlled section lighting and the proposed period of operation.

One way systems shall be provided with adequate sign posting and the Contractor shall limit delays to any traffic to the minimum and with the approval of the Engineer. The travelling public shall be notified by signs, of exceptional delay well in advance of the site of delay, as required by the Engineer.

Payment for temporary diversions, traffic provisions and maintenance of roadways shall be as provided in the Contract and as instructed by the Engineer.
904 Construction of Deviations
Add the following paragraph between the second and the third paragraphs of Item (a):

The Contractor shall programme his works in such a way that traffic shall not be required to pass over more than 1.5 km at any one time unless otherwise approved by the Engineer.
906 Passage of Traffic through the Works
Add the following to this Clause.

The Contractor shall be deemed to have inspected the site and satisfied himself as to the

adequacy of his bid for these works and no additional payments will be made for any expenditure on traffic control. Should the Contractor propose any other method of passage of traffic including construction of traffic deviations and use of the existing roads the Contractor shall investigate the alternatives, construct and maintain them to the satisfaction of the Engineer. The Employer shall not be liable for investigations or costs arising from the alternatives methods of traffic control proposed by the Contractor. Deviations or other measures for traffic control where proposed by the Contractor shall meet the requirements of the specifications and drawings and be approved by the Engineer.

The Contractor shall ensure that the workforce and site supervisory staff at all times wear high visibility garments when work is carried out on or adjacent to a section of the road open to traffic. The Contractor shall ensure that the supervisor or person in charge of the work force is readily recognized from the rest of the workforce. In addition, the Contractor shall provide a full time traffic safety officer to coordinate aspects of road safety for the whole site.

The Contractor shall be deemed to have included all costs related to employing the traffic safety officer and for all the duties performed by him in his rate for passage of traffic.

912 Measurement and payment

(a) Item: Construction of Deviation

Amend as follows:

The rate for construction of deviation shall include provision, placing, forming and compaction of gravel sub-base, stone base and bituminous wearing courses.

(b) Item: Provide and Maintain Road Signages

Unit: Lump Sum

Payment of the lump sum shall be through equal monthly instalments over the period of the Contract on a pro rata basis subject to the approval of Engineer.

(b) Item: Maintain existing Roads and deviations

Unit: Lump Sum

Payment of the lump sum shall be paid per kilo metre length the period of the Contract, excluding the Defects Liability Period provided that the total sum of instalments paid shall not exceed the lump sum; and

If any month the Engineer is not fully satisfied that the Contractor has fully complied with all the provisions of this sub-section, the Employer shall withhold the whole of the instalments due to the Contractor and the Engineer shall, in addition, deduct from any monies due to the Contractor a sum of Kshs 150,000 per day for the period of non-compliance from the date of the Engineer's notice for that month.

Where notified by the Engineer the contractor shall complete maintenance on a section or sections of the road so notified within 14 days. Provided further that, if the Contractor fails to complete maintenance on any section within 14 days of the Engineer's notification thereof, the Engineer shall deduct Kshs. 200,000 for delay per day.

(c) Item: Reinstatement of Deviations

In the first paragraph of Clause 912 (h), delete the words “by the lump sum stated in the Special Specification’ and replace with ‘as described under Item 9.04 of the Bill of Quantities”.

1100 SHOULDERS AND FOOTPATHS

Add the following to this section:

1107 Footpaths and market area

Where shown on the drawings or directed by the Engineer, footpaths shall be constructed. The Footpaths shall be constructed using the precast concrete paving blocks as the finish or asphalt or gravel wearing course. The line of the footpaths shall be as shown on the drawings or as directed by the Engineer.

1107.1 Pre-cast Concrete Paving Blocks

Precast concrete blocks shall be hydraulically pressed, complying with BS 7263: Part 1. Blocks shall be laid in accordance with BS 7263: Part 2 to the required cross fall.

1107.2 Flexible Surfacing for Footpaths and other Paved Areas

Flexible surfacing for footpaths and paved areas shall be laid in compliance with section 16 of the Standard Specification.

Surfacing shall be laid true to level and cross fall as shown on the drawing or instructed by the Engineer. Payments for flexible surfacing on footpaths will be measured and paid in accordance with the provisions of section 16 of Standard Specification.

1108 Measurement and Pavement

(a) Item: Precast Concrete Paving Blocks

Unit: m^2

Precast concrete blocks shall be paid by the area measured on plan. The rate shall include for supplying, laying the bedding, jointing, compacting, laying at kerbs and radii and all the Contractor’s obligations with respect to this clause.

1200 NATURAL MATERIAL SUBBASE AND BASE

1201 GENERAL

Natural materials for base and sub base shall conform to the specifications given in Section 12 of the Standard Specifications for Road and Bridge Construction for cement and lime improved base and sub base.

1202 MEASUREMENT AND PAYMENT

Natural material for sub base and base shall be measured by the cubic metre placed and compacted upon the road calculated as the product of the compacted sectional area laid and the length.

Measurement and payment of natural materials for sub base shall be in conformity with Method A of the Standard Specification with the following amendment

Delete “Free haul of 1.5km” whenever it is referred to under this Clause. No separate payment shall be made for overhaul in this contract.

1203 HANDPACKING

Sources of Material

The Contractor may obtain suitable material from existing commercial quarries. Before being delivered to the site of the Works, the material will be tested for compliance with the requirements stipulated in the following sub clauses.

General Requirements

Where the use of hand packed stone is specified, the rock from which the stones and screenings are produced shall comply with the following.

A.C.V. – Max. 40%
L.A.A. – Max. 30%
S.S.S. – Max. 12%

Stones

The stones shall be free from an excess of flat or elongated particles, soft and less durable rock, clays, loam, topsoil and other deleterious matter. The stones shall be of such grading and size that they pack firmly when laid by hand. The larger stones shall have a maximum dimension slightly greater than the thickness for the required compacted layer and be of a shape acceptable to the Engineer. The smaller stones shall have a reasonably uniform grading and be of a nominal size suitable, in the opinion of the Engineer, for filling the surface voids of the as placed larger stones in place. The nominal size of the smaller stones will be of the order of 50mm.

Screening

The screenings shall consist of tough durable crushed rock, free from an access of flat, elongated, soft or disintegrated pieces and harmful material, such as loam, clay, organic matter, or other deleterious substances and shall be to the Engineer’s approval.

The grading of the screenings shall form a smooth curve and shall be within and approximately parallel to the following limits: -

B.S. Sieve Size	Percentage by Weight Passing B.S. Sieves
10mm	100
5mm	85-100
0.425mm	30-50
0.150mm	10-30
0.075mm	0-20

Sandy soil which may, with the approval of the Engineer, be added to the screenings or used in lieu of the screenings, shall comply with the following requirements: -

It shall consist mainly of sand sizes and have a reasonable smooth grading.
The fraction passing 0.075mm sieve shall be less than the weight passing 5mm sieve.
P.I. shall not be greater than 5.

Construction

On the prepared area, individual stones shall be positioned by hand with the greatest dimension vertical, and the largest and flattest end downwards. The greater number of stones shall be slightly higher than the thickness of the layer when laid. After placement of the stones in the specified manner, the material shall be initially compacted, preferably with a grid roller and a vibratory roller, which shall continue until the layer is thoroughly keyed, and until the compacted layer contains not more than 10% air voids. The irregularities that may show up during compaction shall be corrected by loosening the surface and removing or adding material as may be required and recompacting. Where necessary quarry fines of the same material shall be spread and broomed into the interstices and rolling shall continue until no more fines will go in to give a homogenous compacted layer of sub base.

Measurement and Payment

The stone will be paid for as the volume in cubic metres of material measured in place upon the road. The volume of material shall be calculated as the product of the compacted thickness specified or ordered by the Engineer and the net area required to be laid. The rate shall be the full inclusive price for providing, laying, packing and compacting the material and shall include for complying with Clauses 1311a), b). The rate shall also include for all haulage.

1204 MATERIAL REQUIREMENTS

The Contractor shall allow for winning, hauling to site, laying, watering and compacting to 100% MDD (AASHTO T.180). The material shall also comply with the following requirements:-

P.I. - Max 15

CBR @ 100% MDD (modified AASHTO T180) at 4 days soak: Min 30

P.M. - Max 250

1300 GRADED CRUSHED STONE SUBBBASE

1303 Material requirements

The material for graded crushed stone Sub-base shall comply with requirements for Sub-base stone Class B 0/40. After compaction and compliance with the requirements of Clause 1403 of this specification below, the Sub-base/Base graded crushed stone material shall have a maximum of 8% of particles smaller than 0.075 mm and the resultant layer shall comply with all requirements of Section 13 of the Standard Specification.

The crushing ratio for all graded crushed stone pavement materials shall be minimum 100%.

1306 Laying and Compacting Graded Crushed Stone Sub-base

Graded crushed stone shall be laid by a paving machine.

Add the following to this section:

1311 In Situ Reprocessing of Graded Crushed Stone

In pavement reconstruction sections with an existing graded crushed stone base, the existing graded crushed stone shall be used in pavement and shoulder construction. The bituminous layer shall be removed to spoil or for recycling as instructed by the Engineer, leaving in place the existing graded crushed stone base in situ. After removal of surfacing, the graded crushed stone shall be jointly inspected by the Engineer and Contractor and any contaminated material re-used in earthworks, deviations or disposed off in manner approved by the Engineer. Where the contaminated layer extends into a lower pavement layer, the Existing sub-base or sub-grade layer shall be reworked and re-compacted before reprocessing the graded crushed stone layer. Before addition of any stone material the existing surface shall be lightly compacted to remove undulations and levels taken. The Contractor shall confirm the grading of the stone material and shall add imported material, mixed in such a manner that the reprocessed material shall comply with the requirements of Clause 1303 of the Standard Specification. The material shall be scarified, mixed, watered, spread and compacted as sub-base or base in the carriageway and/or shoulders as shown on the drawings or directed by the Engineer.

1400 CEMENT TREATED MATERIALS

1403 Cement Treatment

Cement for improvement shall be Ordinary Portland Cement complying with Clause 207 of the Standard Specification. The cement content of the improved graded crushed stone material will be in the range of 1% to 2% by weight. The actual cement content requirement will be determined on site as directed by the Engineer after laboratory and site trials.

14A LEAN CONCRETE

14A/04 Mix Requirements

(i) Proportions

The ratio of cement to aggregate shall be 3% by weight (including any absorbed moisture but excluding free water in the aggregate).

14A/05 Method of Construction

(i) Curing

Add the following to this Clause:

The lean concrete shall be protected from injuries action by sun, rain, flowing water, frost, or mechanical injury. At completion of finishing and at the time the concrete surface has hardened enough to prevent the surface being marred by the curing material it shall be cured by one or more of the following methods:

Moist Curing: Wet the concrete surface with a fine spray of water and cover with water proof paper, polythene-coated burlap, or polythene sheeting. Thoroughly saturate polythene-coated burlap with water before placing. Select size of sheets that are at least 300 mm longer than necessary to cover the entire width and edges of base. Place sheets with light coloured side up. Overlap adjacent sheets not less than 300 mm with the lapped edges securely weighed down or the sheets lapped 150 mm and cemented or tampered to form a continuous cover and closed joint. Place the weight on the cover down to prevent displacement or billowing from winds. Fold coverings down over the exposed edges and secure with a continuous bank of earth or other approved means. Use covers in good condition when placed and immediately repair tears and holes they occur during the 7-day curing period.

Liquid Membrane-forming Compound Curing: Apply compound immediately after surface loses its water sheen and has a dull appearance. The curing membrane method should conform to AASHTO M 148. Mechanically agitate curing compound during use. Apply at maximum rate of 5.0 square meters per litre of compound. If compound lacks uniform continuous coherent films or exhibits checks, cracks, peels, or pinholes, apply an additional coat of compound to areas where films is defective. Have readily available impervious sheet curing for use to protect freshly placed concrete in the event that conditions occur to prevent correct application of compound at the proper time. Re-spray surfaces with curing compound after rainfall. Apply at the same rate required above.

The concrete surfaces shall be protected from foot and vehicular traffic and other sources of abrasion for a minimum of 72 hours. The curing method adopted shall be maintained for the entire curing period.

14A/08 Measurements and payment

(a) Item: Curing lean concrete

Unit: m^2

The unit of measurement shall be the area of surface cured satisfactorily. The rate shall allow for complying with Section 14A of the Standard Specification.

1500 BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING

1502B Materials for Prime Coat and Tack Coat

The binder for prime coat shall be MC 70 cutback bitumen. This shall be applied over granular surface to receive any bituminous layer.

The binder for tack coat shall be K1-60 bitumen emulsion. This shall be applied over bituminous surface to receive further bituminous layer. A tack coat shall also be applied on prime coat, which has lost its adhesive properties due to contamination, long exposure or weathering before receiving bituminous layer. Such an application shall be made without additional expenditure by the Employer, unless it is required due to reasons outside the Contractor's control.

1504B Spraying of Prime Coat and Tack Coat

The rate of application of prime coat shall be from 0.8 to 1.2 litres/m². The exact quantity to be applied may be varied within these limits to suit field conditions and will be determined from trials by the Contractor and approved by the Engineer.

The rate of application of the tack coat on bituminous surface shall be 0.8 to 1.0 litres/m². The exact quantity to be applied may be varied within these limits to suit field conditions and will be determined from trials by the Contractor and approved by the Engineer.

1502C Materials for Surface Dressing

(a) Binder

The binder shall be 60/70 penetration bitumen.

(b) Chippings

(i) Hardness, soundness, shape and cleanliness

Stone for surface dressing on the carriageway and shoulders shall be class 1. Should it be necessary and in the Engineers opinion to clean chippings before laying, the Contractor will wash the chippings to the satisfaction of the Engineer and no extra payment will be made for this operation.

1503C Rate of Application of Binder and Chippings

Rates of spray of bituminous binder and spread rates for chippings shall be as stated in the relevant items in the Bill of Quantities or as instructed by the Engineer. The exact rate to be applied may be varied to suit field conditions and will be proposed by the Contractor for the agreement of the Engineer.

Should any change occur in the nature of source of chippings or binder, the Contractor shall advice the Engineer accordingly who will then decide if new field trials are necessary and if any revisions are required to the spray and spread rates.

Payments for binder and chippings will be based on instructed rates.

1505C Pre-coated chippings

Where shown on the drawings or instructed by the Engineer, chippings used for surface dressing shall be pre-coated. The bituminous binder used for pre-coating shall be A3 anionic bitumen emulsion.

The chippings shall be completely coated with the binder at a nominal rate of 0.4% - 0.8% by dry weight of chippings. The actual rate of application should be as instructed by the Engineer following the Contractor's field trials.

The mixing plant shall comply with the requirements of Clause 1603A, Parts (a) and (b), of the Standard Specification.

The binder shall be heated so that it can be distributed uniformly and care shall be taken not to overheat it. The temperature shall at no time exceed 35ºC.

The chippings shall be washed (if necessary) dried and heated so that they are mixed at a temperature of between 20ºC and 35ºC The binder shall be introduced in the mixer in the amount specified and the materials mixed until a complete and uniform coating of the chippings is obtained.

Should any change occur in the nature of source of chipping or binder the Contractor shall advise the Engineer accordingly who will then decide if new field trials are necessary and if any revisions are required to the spray and spread rates.

1508C Application of Surface Dressing

At the joint between the shoulder and carriageway, each layer of surface dressing on the carriageway shall be extended 100 mm into the shoulder. In like manner each layer of surface dressing on the shoulder shall also be extended 100 mm into the carriageway. The Contractor shall allow in his rates for this overlap. No additional payment will be made for either the binder or the chippings when complying with this requirement.

1509C Aftercare and Control of Traffic

Surface dressing shall not be trafficked for at least seven (7) days. Where the surface dressing is to be applied to new asphalt concrete, a minimum period of 72 days must elapse before commencing the surface dressing.

1511C Measurement and Payment

(c) Item: Pre-coated chippings

Unit: m^3 of each nominal size of each class

Pre-coated 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 instructed to be covered and the reciprocal of the instructed rate of application in m^2 per M^3 or the actual rate of application in m^2 per m^3 whichever calculation gives the lower volume.

The rate for chipping shall include for the cost of providing and hauling the chippings and bitumen pre-coating the chippings with bitumen at the instructed rates, spreading and rolling the chippings at the instructed application rate, all hauls as necessary and complying with parts A and C of Section 15.

1600 BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES
1600A GENERAL
1603A Construction Plant
(a) Compaction Plant

To achieve specified densities it is expected that vibrating rollers will be required to achieve satisfactory results. It is essential that thorough pre-construction trials be carried out to ensure that the vibrating rollers are set up at the optimum amplitude and frequency for the material being laid that they do not break down aggregate particles and that the optimum compaction temperatures are established to allow compaction without creating ripple effects or other distortions of the surfacing.
1606A Site trials
Delete the second paragraph and insert the following:

The trials shall be carried out to:

Test materials designed in the laboratory so that a workable mix, which satisfies the specified requirements can be selected.

Enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Renumber paragraph 5 from "(v)-(vi)" to read "(v)-(viii)".
1607A Mixing of Aggregates and Bitumen
Delete the second and third paragraphs and then add the following:

The aggregates minus the filler prepared as specified above shall be accurately weighed and conveyed into the mixer in proportionate amounts of each aggregate size required to meet the job-mix formula. The required amount of bitumen for each batch shall be introduced into the mixer in batch mixing. The bitumen shall be added after the aggregates have been introduced into the mixer and mixed for 5 to 10 seconds. The filler shall be added after the bitumen and mixing shall continue after addition of the filler for at least the time recommended by the plant manufacturer or as much extra time as is necessary to obtain a homogenous mixture but for no longer.

The Aggregates and bitumen shall each be heated to enter the mixing chamber at temperatures selected within the range 150 ^{o}C to 170 $^{\circ}$C. The temperature of the stone at entry to the mixing chamber shall not be more than 15 ^{o}C higher than that of the bitumen; the temperature of the bitumen shall be such that on entry to the mixer its Kinematic viscosity is in the range of 150-300 centistokes. The temperature of the aggregate and bitumen at entry into the mixing chamber shall be chosen within the above limits and having regard to the prevailing air temperature and haulage distance to ensure that the temperature of the mix is not less than 135°C when it is laid and not less than 120°C when rolling is commenced. If excessive displacement occurs under the roller the minimum rolling temperature may be reduced at the sole discretion of the Engineer.

The volume of the aggregates and bitumen shall not be so great as to extend above the tips of the mixer blades when the blades are in vertical position. All overheated and carbonized mixtures which form or show indication of moisture will be rejected. When moisture is

detected in the finished mixture, all aggregates in the bins shall be removed and returned to the stockpiles.

1608A Transporting the Mixture

Delete the entire clause and replace it with the following

The mix shall be transported from the mixing plant to the spreader in truck having tight, clean smooth beds, which have been treated to prevent adhesion of the mixture to the truck bodies. Gasoline, Kerosene, diesel fuel or other solvent shall not be used for this purpose. Loads shall be covered by waterproof canvas or metal sheets during wet weather. Vehicles shall be insulated when the air temperature and/or length of haul make this necessary to maintain the temperature between specified limits. Any loads wetted excessively by rain will be rejected. Hauling over freshly laid material will not be permitted.

1609A Laying the Mixture

Add the following paragraphs:

Mixtures that have a temperature of less than 135°C when dumped into the paver will be rejected. The paver shall be adjusted and the speed regulated so that the surface of the course will be smooth and the course of such depth shall be such that, when compacted, it will conform to the cross-section shown on the drawings. Lanes shall be parallel to the road centreline.

All joints shall present the same texture, density and smoothness as other areas of the surfacing. The joints between old and new lanes or sections shall be carefully formed in such a manner as to ensure a continuous bond between the old and new pavement. All contact surfaces at cold joints, and joints with structures including manholes and pits shall be coated with a thin and uniform coat of MC 70 or other medium curing bitumen.

1610A Compaction

Add the following paragraphs:

Tests for conformity with the smoothness and levels specified shall be made by the Contractor immediately after initial compaction and any deviations in excess of the specified tolerances shall be corrected by loosening the hot surface with rakes and removing or adding materials as necessary before continuing the rolling. The speed of the rollers shall not exceed 5 km/h and shall at all times be slow enough to avoid displacement of the hot mixture. Any displacement of the mixture, occurring as results of reversing the direction of the rollers, or from any other cause, shall be corrected at once by loosening the surface with rakes and re-rolling. Rolling of the surfacing shall be continued until all roller marks are eliminated and the required density is obtained.

The rollers shall not be permitted to stand on surfacing which has not been fully compacted. Precautions shall be taken to prevent the dropping of oil, grease, gasoline or other foreign matter on any layer.

The Contractor shall provide competent workmen who are capable of performing all work incidentals to the correction of all surfacing irregularities.

After final rolling, no vehicular traffic of any kind shall be permitted for at least 24 hours.

1611A Finishing Joints and Edges

Add the following to this clause:

Construction joints in the various pavement layers shall be staggered by at least the following distances

Joints in Binder Course relative to joints in Wearing Course: 500 mm
Joints in Dense Bitumen Macadam base relative to joints in Wearing Course: 400 mm

The contractor shall produce a plan showing all pavement construction joints for approval by the Engineer before pavement construction commences.

Transverse joints in Dense Bitumen Macadam Base Binder and Wearing Course shall be staggered by at least 500 mm. The roller shall pass over the unprotected end of the freshly laid mixture only when laying of the surfacing is to be discontinued for such length of time as to permit the mixture to become cold. Otherwise 500 mm at the end of the lane shall be left uncompacted.

Cold transverse joints shall be cut back to expose an even, vertical service for the full compacted thickness of the course and painted with medium curing cutback bitumen as specified above. The fresh mixture shall be raked uniformly against the joint and carefully compacted to ensure a good bond with the cold material.

The Contractor shall adjust any kerbs, gulley pots and chambers in accordance with final finished road level before laying the final Wearing Course.
1614A Tolerances
Add the following at the end of the second paragraph:

Passing sieves between 1.0 mm and 0.075 mm sizes, +3% by total weight of dry aggregate including mineral filler

Passing 0.075 mm sieve, +2% by total weight of dry aggregate including mineral filler

1600B ASPHALT CONCRETE FOR SURFACING
1602B Materials for Asphalt Concrete
(a) Penetration grade bitumen

Delete sub-section (a) and replace with the following:

Bitumen shall be penetration grade, and shall meet the requirements of Table 4.3 in ORN 19 as summarized below:

Table 4.3 (ORN 19) Minimum requirements for penetration grade bitumen

Test, based on Original Bitumen	Test Method (ASTM)	Penetration Grade		
Penetration at 25°C	D5	40/50	60/70	80/100
Softening point (°C)	D36	49-59	46-56	42-51
Flash point (°C) (Min)	D92	232	232	219
Solubility in trichloroethylene (%) (min)	2042	99	99	99
TFOT heating for 5h at 163°C:				
(a) Loss by mass (%, (Max)	D1754	0.5	0.5	0.8
(b Penetration (% of original),(Min)	D5	58	54	50
(c) Ductility at 25°C, (Min)	D113	-	50	75

The bitumen for asphalt concrete works shall 60/70 grade.

(c) Mineral Filler

Under this sub-clause in the Standard Specification, rename Table 16B-1 as 16B-1 (a)

(ii) Add the following

The coarse aggregate shall entirely be crushed rock from a source known to give high values of stability (>9 kN) in the Marshall Test. Crushed river gravel shall not be used. Aggregate shall be Class "a" meeting the requirements given in Table 16B-1(b) below.

Table 16B-1(b) Requirements for coarse aggregate (retained on 6.3-mm sieve)

Property	Test	Property
Cleanliness	Sand equivalent for <4.75 mm fraction (Material passing 0.425 sieve) Plasticity index[2] Linear shrinkage	>40 <4 <2
Particle shape	Flakiness index (FI)[3]	<25
Strength	Aggregate Crushing value (ACV)[4] Aggregate impact value (AIV)[4] 10% FACT (dry) KN[4] Los Angeles Abrasion (LAA)[5]	<25 <25 >160 <30
Abrasion	Aggregate Abrasion Value[4]	<12

Property	Test	Property
Soundness[7]	Sodium Sulphate Soundness (SSS): Coarse aggregate Fine aggregate Magnesium Sulphate Soundness (MSS): Coarse aggregate Fine aggregate	 <10 <16 <15 <20
Polishing	Polished Stone Value	>60
Water absorption	Water Absorption[6]	<2
Bitumen affinity	Immersion Mechanical test: index of retained Marshall stability [8] Static immersion test[9] Retained indirect Tensile strength[10]	>75 >95% coating retained >79% (at 75% VIM)

Key

AASHTO 1176
British standard 1377, part 2
British standard 812, part 105
British standard 812, parts 110 to 114
ASTM C131 and C535
British standard 812, part 2
AASHTO T104
D whiteoak (1990) (shell bitumen handbook)
AASHTO T182
AASHTO &283

The aggregates for bituminous mixes shall be stored in single sizes in separate bins or in areas covered with tightly laid wood planks, sheet metal, hard compact gravel, concrete or other hard and clean surfaces. The surfaces shall be self-draining, and in such a manner that will preclude the inclusion of foreign material. Aggregates of different grades and sizes and from different sources shall be stored in separate piles and if these piles are close together they shall be separated by bulkheads.

1603B Grading Requirements

The grading mixture of a coarse and fine aggregate shall be within and approximately parallel to the grading envelopes as given in table 16B-1(a) for 0/20 binder coarse. In addition, the material shall comply with the requirements below.

The Contractor shall investigate a number of gradings so that a worktable mix, which also

retains a minimum of 3% voids in mix (VIM) at refusal density, is identified. As guidance towards identifying a suitable grading, recommendations are provided in Tables 16B-1(c) and (d)

Table 16B-1(c): Superpave aggregate grading control point

Nominal Maximum Size (mm), (Note 1 below)	Sieve size (mm)	Control point (%passing)	
37.5	0.075 2.36 25.0 37.5 50	0 15 90 100	6 41 90 100 -
25.0	0.075 2.36 19.0 25.0 37.5	1 19 90 100	7 45 90 100 -
19.0	0.075 2.36 12.5 19.0 25.0	2 23 - 90 100	8 49 90 100 -
12.5	0.075 2.36 9.5 12.5 19.0	2 28 - 90 100	10 58 90 100 -

Table 16B-1(d): Superpave boundaries of aggregate restricted zone

Sieve size within restricted zone	Minimum and maximum boundaries of Sieve size for nominal maximum aggregate size (minimum /maximum % passing)			
	37.5	25.0	19.0	12.5
4.75 2.35 1.18 0.6 0.3	34.7-34.7 23.3-27.3 15.5-21.5 11.7-15.7 10.0-10.0	39.5-39.5 26.8-30.8 18.1-24.1 13.6-17.6 11.4-114	- 34.6-34.6 22.3-29.3 16.7-20.7 13.7-13.7	- 39.1-39.1 25.6-31.6 19.1-23.1 15.5-15.5

Note (1): The definition of Nominal Maximum Size of aggregate is one sieve larger than the first sieve to retain more than ten per cent of the aggregate. It is also recommended that where possible that largest particle size should not be more than 25 mm so that the requirements of the marshal test can be complied with.

Mixes identified for compaction trials shall be manufactured to the laboratory design bitumen content and two other bitumen contents of + 0.5 % and 1.0% additional bitumen. Cores will be cut to determine the density of compacted material. The core will then be re-heated to 145±5°C in the appropriate mould and compacted to refusal in the vibrating hammer test. The cores cut from the compaction trial must have a destiny equivalent to 95% refusal density.

The compaction trials will identify a workable mix which can be made to bitumen content which gives 3% voids in mix (VIM) at refusal density.
1604B Requirements for Asphalt Concrete

The nominal binder content shall be 5.0% - 6% in addition to the requirements given in Table 16B-2 0f the Standard Specification. The maximum Marshall stability of the mix for 2x75 blows shall be 9 kN and, at compaction to refusal, it shall have 3% voids in mix (VIM).

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 the test procedure. A grading conforming to the type I binder course detailed in Table 16B-1(a), 0/20, of the Standard Specification should be tested (but with 100% passing the 25 mm 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 BS 598 (Part 104:1989) with the following revision.

"It should first be confirmed that compaction on one face of the sample gives the same refusal density as when the compaction cycle is applied to both faces of the same sample. The procedure which gives the highest results shall be used"

From the bitumen content –VIM relationship, bitumen content which corresponds to VIM of 3% shall be identified. Compaction trial shall be undertaken to confirm the workability of the mix. At least two or more grading will be required for compaction trials. The compaction trials will identify a workable mix which can be to a bitumen content which gives 3% voids mix (VIM) at refusal density.

1605B Mixing and laying asphalt concrete

The temperature of the bitumen and aggregates when mixed shall be 110±3°C above the softening point (Ring and Ball) of the bitumen.

Compaction shall 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 shall be as follows:

(a)	For 37.5 mm mix	65 mm
(b)	For 25.0 mm mix	60 mm
(c)	For 19.0 mm mix	50 mm
(d)	For the 12.5 mm mix	40 mm

1606B Compaction

Rolling shall be continued until the voids measured in the completed layer are in accordance with the requirement for a minimum compacted density of 98% of Marshall Test Maximum Density or a minimum mean value of 95% of refusal density (with no value less than 93%) as appropriate.

1608B Sealing bituminous surface

After the Wearing Course has been trafficked and bitumen has hardened, the Wearing Course shall be sealed with 10/14 mm pre-coated chippings in accordance with Clause 1505C. The period of hardening will depend on the traffic level and should be such that the chippings will

not become embedded in the wearing surface. The Contractor will propose and the Engineer will approve a section to be ready for sealing.

1700 CONCRETE WORKS

1703 Materials for Concrete

This work shall consist of placing selected approved material of 250 mm 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.

Materials

Selected rock: The selected rock boulders to be placed for this work shall be hard, sound and 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 300 mm.

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 250 mm over the compacted bed where the bottom slab will rest. Coarse sand shall 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.

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.

Add the following for fine aggregate

It shall also meet the following requirements.

Test	Test Method	Requirement
Fineness Modulus	AASHTO M6	2.0-3.5
Sodium Sulphate Soundness loss on 5 cycles	AASHTO T104	10% Max.
Friable particles content	AASHTO T112	1% Max.
Test for organic impurities	AASHTO T21	Lighter than standard
Sand equivalent	AASHTO T17	75% Min.
Fraction passing 75 micron sieve	AASHTO T27	5% by weight max. (10% max. for crusher dust)

Add the following for course aggregate

The coarse aggregate shall conform to the following quality requirements:

Test	Test Method	Requirement
Sodium Sulphate Soundness loss on 5 cycles	AASHTO 104	12% max.
Los Angeles Abrasion	AASHTO T96	40% Max.
Content of Friable Particles	AASHTO T112	1% by weight Max.
Soft Fragments and Shale	AASHTO M80	Max. 5% by weight
Flaky Pieces	BS 812	20% Max.
Elongated pieces	BS 812	20% Max.
Combined quantity of chlorides calculated as sodium chloride and sulphates as sodium sulphate	ASTM D1411	1000 ppm, Max.

Add the following to Clause 1703(g):

The water for mixing and curing concrete shall not contain solids and impurities more than the following permissible limits:

Impurities	Permissible Limits
Organic, mg/l	200
Inorganic, mg/l	3000
Sulphates (as SO_4), mg/l	500
Chlorides (as Cl), for plain cement concrete work and 1000 mg/l for reinforced concrete work mg/l	2000

The pH value of work shall generally be between 6 and 8.

Add the following to Clause 1703:

(iii) Limits for Total Chemical Impurities in concrete

For reinforced concrete work the total chemical impurities collected from aggregates, cement, admixtures and water shall not exceed the following limits:

Impurities	Permissible limits of undesirable chemicals in concrete in percentage by weight of cement
Chlorides (as Cl ion), (%)	0.06
Sulphates (as SO_3), (%)	4.0

1703a Levelling of Concrete for Bottom Slab Including Formwork Cost
This work shall consist of placing and levelling lean or blinding 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 in conformity with the lines, grades, thickness and typical cross-sections shown on the drawings unless otherwise directed by the Engineer.

Materials for levelling concrete

Requirement for the concrete class 15/20 is specified as follows:
Design compressive strength, 28 days : 15 N/mm^2
Maximum size of coarse aggregate : 20 mm

Maximum cement content : 300 kg/m^3
Maximum water/cement ratio of 50% with slump of 80 mm

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.

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 and which has been executed in accordance with the drawings and the Specifications.

Payment for this work shall include furnishing and placing all materials, labour, equipment and tools, and other incidentals to specifications and as directed by the Engineer.
1703b Reinforcement Bars for Walls and Slabs
This work shall consist of furnishing, fabricating and placing in the concrete of the bottom slab, top slab, median wall, sidewalls, wing walls and aprons, reinforcing bars of the quality, type and size in accordance with these specifications and in conformity with the requirements shown on the Drawings.

(a) Material

Reinforcement bars shall be deformed and shall meet the requirements of British Standard BS 4461, unless otherwise called for on the drawings or approved by the Engineer.

No reinforcement bar shall be delivered without a certificate guaranteeing the yield stress. The reinforcement bars shall be kept off the ground, free from dirt, oil, grease, or avoidable rust and stored within a building or provided with suitable covers.

If it is necessary for the Engineer to ascertain the quality of the reinforcement bars, the Contractor shall test the reinforcement bars, at his own expense, by the means as directed by the Engineer.

(b) Construction Method

Bar Bending Schedule

The Engineer shall provide the Contractor with bending schedules showing the location types, sizes, bending dimensions and cut lengths of the reinforcement bars required to be fixed in the works.

Cutting and bending

Qualified men shall be employed for the cutting and bending and proper application shall be provided for such work.

Bars shall be cut and bent cold to the dimensions indicated and with equipment and methods approved by the Engineer.

Stirrups and tie bars shall be bent around a pin having a diameter not less than 15 times the minimum diameter of the bars. Bends of other bars, where full tension in the bar may occur, shall be made around a pin having a diameter not less than 7.5 times the bar diameter as shown on the drawing.

Reinforcing bars shall be accurately formed to the shapes and dimensions indicated on the Drawings, and shall be fabricated in a manner that will not be injurious to the materials.

Placing

Reinforcing bars shall be accurately placed in proper position so that they be firmly held during placing of concrete.

Bars shall be tied at all intersections by using annealed iron wire 0.9 m or larger diameter or suitable clips.

Distances from the formwork shall be maintained, corrected by means of metal hangers, metal blocks, metal supports or other supports approved by the Engineer.

The Engineer shall inspect the formwork and reinforcement bars after placing. When a long time has elapsed after placing reinforcement bars, they shall be cleaned and inspected again by the Engineer before casting concrete.

Splicing and Joint

When it is necessary to splice reinforcement bars at points, position and methods of splicing shall be determined based on strength calculations and approved by the Engineer.

In lapped splices, the bars shall be lapped by the required length, and wired together at several points by using annealed iron wire larger than 0.9 mm.

When a long time has elapsed after placing reinforcement bars, they shall be cleaned and inspected again by the Engineer before placing concrete.

Joint

Exposed reinforcement bars intended for bonding with future extensions shall be effectively protected from injury and corrosion.

Oxyacetylene welding joint of reinforcing steel shall be carried out only if authorized by the Engineer in writing.

Measurement and Payment

Bending and installation of reinforcement bars of piers and abutments shall be measured in terms of tonnes. The length of steel bar of each size will be shown on the drawings in which the bar length for splicing is excluded. In computing the weight to be measured, the theoretical weights of bars of the cross-section shown on the Drawings or authorized shall be used. These weights are given in the table below.

Bar Type and the Nominal Diameter in Millimetres	Weight of Bar in Kilograms per 12 m length of bar
Y10	7.40
Y12	10.66
Y16	18.95
Y20	29.60
Y25	46.30
Y32	75.80

1703c Formwork for Vertical Walls and Slabs

This work shall consist of all temporary moulds for forming the concrete for culvert walls and slabs together with all temporary construction required for their support. Unless otherwise directed by the Engineer all formwork shall be removed on completion of the walls and slabs.

Materials

Formwork 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 shall be either neat oils containing a surface activating agent, cream emulsions, or chemical agents to be approved by the Engineer.

Construction Method

Formworks

Formwork shall be designed to carry the maximum loads, which may be imposed and so be rigidly constructed as to prevent deformation due to load, drying and wetting, vibration and other causes. After formwork has been set in correct location it shall be inspected and approved by the Engineer before the concrete is cast.

If requested, the Contractor shall submit to the Engineer working drawings of the formwork and also calculations to certify the rigidity of the formwork.

Unless otherwise described in the Contract, all form joints for exposed surfaces of concrete shall form a regular pattern with horizontal and vertical lines continuous throughout each structure and all construction joints shall coincide with these horizontal and vertical lines. PVC pipes of 50 mm diameter for weep holes shall be arranged as shown on the Drawings.

Unless otherwise specified, formwork shall be designed to form chamfers at all external corners whether or not such chamfers are shown on the Drawings to prevent cracks and other damage from arising.

The inside surface of forms shall be cleaned and coated with a releasing agent to prevent adhesion of the concrete. Release agents shall be applied strictly in accordance with the manufacturer’s detailed instructions. The release agent shall be applied to the formwork prior

to erection. Release agent must not come into contact with reinforcement. Immediately before concrete is cast, the formwork shall be thoroughly cleaned and freed from sawdust, shavings, dust, mud or other debris by hosing with water. Temporary openings shall be provided in the formwork to drain away the water and rubbish.

Scaffolding

All scaffolding required to support the formwork shall be designed and constructed to provide necessary rigidity and support the loads without appreciable deflection or deformation.

Details, plans and structural and flexural calculations for scaffolding shall be submitted to the Engineer for approval, but in no case shall the Contractor be relieved of his responsibility for the results obtained by use of these details.

Removal of formwork

The time at which the formwork is removed shall be the Contractor's responsibility and the formwork shall not be removed until the concrete strength has reached the strength to the approval of the Engineer

Measurement and Payment

No measurement shall be allowed for formwork of temporary construction joints.

Payment for the formwork shall be incidental to the pay items of particular grade of concrete for furnishing, erecting, jointing all the formwork for the concrete including furnishings and applying release agent, and construction of the required scaffolding to support the formwork all conforming to the shape, lines, grade and dimensions of the structure as shown on the Drawings, all in accordance with the Drawings and as directed by the Engineer.

1703d Concrete Works to Vertical 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 25/20 shall be used for Culvert walls and slabs.

Concrete Materials

Cement:

Cement shall be of Portland type (Strength 42.5) and shall conform to the requirements of BS 12 or equivalent.

The Contractor shall select only one type or brand of cement. Changing of the 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 his responsibility to furnish concrete of the specified compressive strength requirements.

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 (4) 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 has been stored too long, moist or caked, the cement shall be rejected and removed from the project.

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 requirements in the tables below.

Grading of Fine Aggregate

Sieve Size (mm)	Percentage by Weight Passing
10	100
5	89 – 100
2.5	60 – 100
1.2	30 – 100
0.6	15 – 54
0.3	5 – 40
0.15	0 – 15

Grading of Coarse Aggregates

Size	Amounts finer than each standard sieve percentage by weight							
Coarse Aggregate	40	30	25	20	15	10	5	2.5
	100	-	-	90 - 100	-	30 - 69	0 - 10	-

Other requirements for aggregates are as detailed below.

Fine Aggregates

Fitness Modulus, AASHTO	M – 6
Sodium Sulphate Soundness, AASHTO T104:	Max. 10% loss
Content of Friable Particles AASHTO 112:	Max 1% by weight
Sand Equivalent, AASHTO T176:	Min. 75

Coarse Aggregate

Abrasion, AASHTO T96	Max 405 loss
Soft Fragment and shale, AASHTO M80:	Max. 5% by weight
This and elongated Pieces, AASHTO M80:	Max. 15%

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, vegetation matter and salt as determined by the Engineer.

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.

Chemical admixtures where permitted shall conform to the requirements of AASHTO M194. Unless otherwise specified, only Type A (Water reducing), Type B (Retarding), Type D (Water reducing and retarding), Type F (Water reducing, high range) or Type G (Water reducing, high range and retarding) shall be used.

Admixtures containing Chloride ion (Cl) in excess of one percent by weight of the admixture shall not be used in reinforced concrete.

A Certificate of Compliance signed by the manufacturer of the admixture shall be furnished to the Engineer for each shipment of the material used in the works.

(c) Concrete class 25/20

Concrete Class 25/20 shall be used for culvert walls and slabs. The requirements of concrete Class 25/20 are provided as follows unless otherwise the Engineer will designate any alteration.

Design compressive strength, 28 days: $25N/mm^2$
Maximum size of coarse aggregates: 20 mm
Maximum water/cement ratio of 45% with slump of 80 mm

(d) 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.

(e) Concrete Work

(i) Batching

Batching shall be conducted by weight with accuracy of:

Cement	:	0.5 %
Aggregate	:	0.5 %
Water and Admixture :	1 %	

Equipment should be capable of measuring quantities within these tolerances for the smallest 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.

(ii) Mixing and delivery

Slump of mixed concrete shall be checked and approved at an accuracy of +25 mm against designated slump in these specifications.

(iii) 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 casting operations.

(iv) 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.

(v) Placing

In preparation of the placing of concrete, the interior space of formwork shall be cleaned and approved by the Engineer prior to casting concrete. All temporary members except tie bars to support formwork shall be removed entirely from the formwork 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 cast in the formwork.

(f) Measurement and Payment

Measurement for the Concrete Works Class 25/20 of culvert walls and slabs shall be made in cubic metres for the walls and slabs actually constructed, measured from their dimensions shown on the drawings. Payment for the Concrete Works (Class 25/20) of culvert walls and slabs shall be the full compensation for furnishings all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidentals necessary for the completion of the work in accordance with the Drawings and these specifications and as directed by the Engineer.

1704 Concrete Works of the Beams and Deck Slabs

1704.1 Description

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of the in situ beams and deck slab, including form F3 type finish, in accordance with Standard Specifications and in conformity with the requirements shown on the Drawings.

Concrete Class 30/20 shall be used for beams and slabs.

1704.2 Concrete materials

(a) Cement

Cement shall be of Ordinary Portland (Strength 42.5) type and shall conform to the requirements of BS or equivalent.

The Contractor shall select only one type or brand of cement or others. Changing of the type 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 the cement by the Engineer shall not relieve the Contractor of the responsibility of furnishing concrete of the specified compressive strength requirements.

Conveyance of cement by chute bags shall not be permitted. Storage in the Contractor's silo or store house shall not exceed more than two (2) months, and the age of cement after submitting to the Engineer the result of quality certificate prepared by the manufacturer for his approval.

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.

(b) 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. The aggregates should conform to BS 882.

Grading of aggregates shall conform to BS 812.

Other requirements for aggregates are as given below.

(i) Fine Aggregates

Fitness Modules	AASHTO M-6	2.3 to 3.1
Sodium Sulphate Soundness	AASHTO T104	Max. 10% loss

Content of Friable Particles	AASHTO 112	Max. 1% by weight
Sand Equivalent	AASHTO T176	Min.75

(ii) Coarse Aggregate

Abrasion	AASHTO T96	Max. 405 loss
Soft Fragment and Shale	AASHTO M80	Max. 5% by weight
Thin and elongated pieces	AASHTO M80	Max. 15%

(c) 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, and vegetable matter and salt as determined by the Engineer.

(d) 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.

1704.2.1 Concrete class 30/20

Concrete Class 30/20 shall be used for in situ beams and deck slabs. The requirements of concrete Class 30/20 are as detailed below unless otherwise the Engineer will designate any alteration.

Design compressive strength, 28 days: 30N/mm^2

Maximum size of coarse aggregates: 20 mm

Minimum cement content: 300 kg/m^3, and

Maximum water/cement ratio of 45% with slump of 80 mm

1704.2.2 Proportioning Concrete

The Contractor shall consult with the Engineer as to the 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 requirements 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.

1704.2.3 Concreting Work

Batching

Batching shall be conducted by weight with accuracy of

Cement: ½ %

Aggregate: ½ %

Water and Admixture:1%

Equipment should be capable of measuring quantities within these tolerances for the smallest 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.

Mixing and Delivery

Slump of mixed concrete shall be checked and approved against designated slump in these specifications. The time elapsing from when the water is added to the mix until the concrete is deposited in place at the site of the work shall not exceed thirty (30) minutes in case that the concrete is hauled in non agitative type trucks or carriers, or more than sixty (60) minutes in case that it is hauled in truck mixers or other carriers with agitators.

Concrete in Hot Weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty three degrees Celsius (33^0C) during casting operations.

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, and such night work is subjected to approval by the Engineer.

Placing

In preparation of the casting of concrete, the interior space of formwork shall be cleaned and approved by the Engineer prior to casting concrete. All temporary members except tie bars to support formwork shall be removed entirely from the formwork and not buried in 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 concrete batch immediately after it is cast in the formwork.
1704.3 Concrete class 35/20
Concrete Class 35/20 shall be used for in situ beams and deck slabs. The requirements of concrete Class 35/20 are as detailed below unless otherwise the Engineer will designate any alteration.

Design compressive strength, 28 days: $35N/mm^2$
Maximum size of coarse aggregates: 20 mm
Minimum cement content: 300 kg/m^3, and
Maximum water/cement ratio of 45% with slump of 80 mm

1704.4 Measurement and Payment
Measurement for the Concrete Works for beams and deck 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 of beams and deck slabs shall be full compensation for furnishing all materials of the concrete mixing, delivering, placing and

curing the concrete, equipment and tools, labour and other incidentals including form F3 type, necessary for the completion of the work in accordance with the Drawings and these specifications and as directed by the Engineer.

1705 Mixing Concrete

Add the following to Clause 1705 of the Standard Specification.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or other approved containers. The time elapsing from the time water is added to the mix until the concrete is deposited in place at the site of the work shall not exceed 30 minutes when the concrete is hauled in non-agitating trucks, or more than 90 minutes when hauled in truck mixers or truck agitators.

Where concrete is supplied from a central plant, there shall be sufficient transporting equipment to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper handling, casting, and finishing of the concrete. The method of delivery and handling the concrete shall be in a way which will facilitate casting with a minimum of re-handling and without damage to the structure or the concrete. The methods of delivery and handling for each site shall be approved by the Engineer. The Engineer may suspend the mixing and casting of concrete at any site for which he considers the Contractor's delivery equipment inadequate until such a time as the Contractor provides additional approved delivery equipment.

Concrete shall be allowed to be placed only when the Engineer or his representative is present at the site and has previously checked and approved in writing the positioning, fixing and condition of the reinforcement, and the alignment and suitability of the formwork. Concrete shall be placed so as to avoid segregation of the materials and displacement of the reinforcement. When casting involves dropping the concrete by more than 1.5 metres, it shall be conveyed through sheet metal troughs, chutes or other approved pipes. The chutes, troughs and pipes shall be kept clean and free from coating of hardened concrete by thoroughly washing with water after each operation.

Rename Clause 1740 as 1740.1 and add the following to this clause:

1740.2 Interlocking Concrete Paving Block

(a) Quality

The block for the paving works shall be as shown on the drawings and as directed by Engineer. The blocks shall be 60 mm thick of quality concrete class of such that yields the strength of 50 N/mm2, having specified the size and type with grey or red or combination of them.

Grading of sand for bedding			Grading of sand for the joint filling	
Sieve Size (mm)	Percentage Passing		Sieve Size (mm)	Percentage Passing
9.52	100		2.36	100
4.75	95 – 100		1.18	90 – 100

Grading of sand for bedding			Grading of sand for the joint filling	
Sieve Size (mm)	Percentage Passing		Sieve Size (mm)	Percentage Passing
2.36	90 – 100		0.6	60 – 90
1.18	50 – 95		0.3	30 – 60
0.6	25 – 60		0.15	10 – 30
0.3	10 – 30		0.075	0 – 10
0.15	0 – 15			
0.075	0 – 10			

(b) Foundation of Paving Blocks

Over the prepared and consolidated sub-grade a layer of Sub-base using crushed aggregate shall be laid to falls and slopes to a compacted thickness of 100 mm and compacted with C-10 tonne roller. Over the prepared sub-base, a layer of 3 mm and down fine sand shall be laid and compacted to 25 mm in thickness and to required falls and slope to the satisfaction of the Engineer.

(c) Paving Blocks Laying

The blocks shall be laid on top of the prepared base in required pattern as directed by the Engineer. On completion of the laying work, approved fine screened sand shall be spread over the paving and the joints filled with fine sand compacted as directed by the Engineer. Extra sand on the surface shall be removed by brushing. When required, the edge blocks shall be cut clean and sharp with approved tools and as per the manufacturer's instructions. The cut edges shall be rubbed smooth before laying. Compaction with a power vibrating plate (Wacker model VPH 70) shall be used suitably as recommended by the approved proprietary manufacturer. Any blocks damaged during laying shall be replaced. The entire work of the installation and materials shall meet the approval of the Engineer.

1741 Measurement and Payment
Delete Clause 1741(c).

Add the following to Clauses 1741 (d), (e) and (f):

Read Clause 1741(l) as follows:

The precast unit of measurement shall be m^3 of particular grade of concrete.

Add the following to this section:
1742 Plant and Equipment for Aggregates and Concrete
1742.1 Aggregate Processing Plant
Aggregate processing plant to be provided by the Contractor shall conform to the following:

(a) Type of Plant
Except where aggregates are supplied from commercial sources, a modern and dependable

aggregate plant capable of producing satisfactory concrete aggregates in sufficient quantities and the rate necessary to meet the requirements of the construction schedule shall be provided at a location acceptable to the Engineer. Complete facilities shall be provided for proper crushing, washing, classifying, storing, reclaiming and delivering the aggregates to the mixing plant.

(b) Samples and Test

The aggregate plant shall be operated for a sufficient time in advance of the dates set for first placement of concrete to permit the development of procedures which result in high capacity production of aggregates proven by tests to meet all the requirements of this specification.

(c) Fines in Sand

The facilitation for fine aggregate production shall be so designed and operated as to retain the necessary quantity of finer fractions. An excess of fines will not be permitted. If natural sand is from marine source, the sand shall be cleaned of clayey material and washed with potable water before use. All crushing, washing, screening, classifying, blending, batching, or other properties of fine aggregate necessary to meet these specifications shall be performed so as to produce acceptable gradation complying with this specification.

(d) Drainage of Sand

Aggregates shall not be removed directly from the washing or classifying operations to the aggregate bins in the concrete mixing plant, but shall be stored as required, to permit drainage of excess water and in such a manner as to avoid contamination by foreign materials. Sand shall remain free-draining storage for at least 48 hours prior to use.

(e) Segregation

The stockpiles for aggregates shall be formed so as to prevent segregation, and as approved by the Engineer. The deposition and removal thereof shall be conducted in a manner to maintain the uniformity of grading. The side slopes of stockpiled aggregates shall be kept flatter than the angle of repose to prevent accumulation of coarser material at the bottom of the slope.

(f) Volume of Storage

Sufficient live storage of all size fractions of processed aggregates shall be maintained at all times, to permit continuous placing of concrete at the rates so as to meet the scheduled requirements. If aggregates are stockpiled on the ground, the bottom portion of the stockpile within 300 mm of ground shall not be used. The Contractor may also plan to store sufficient quantity of coarse and fine aggregate so that concreting during the rains can proceed without hindrance as the collection of the same during the rains may be difficult.

(g) Approval of Aggregate Plant Layout

Plans and written specifications for the aggregate processing plant including description and capacity data on the processing equipment, and flow charts of the whole processing operation which shall show rates of flow of material at the various crushing and separation points in the processing, as well as the volumes of the stockpiles and the number and types of equipment to be used in transporting the aggregates from aggregate plant to the mixing plant, shall be submitted to the Engineer in advance of plant erection for his approval.

1742.2 Concrete Plant

A modern dependable batch type mixing plant capable of producing concrete of specified quality and at the rate of output required to meet the specified requirements, and a balanced

complement of transporting, handling and placing equipment shall be provided at locations and in a manner approved by the Engineer. The concrete mixing plant shall be completely installed for a sufficient length of time prior to scheduled date for placement of first concrete, to enable the Engineer to make the necessary physical tests, prior to use of the plant for the production of concrete.

(a) Standby Arrangement

As a standby arrangement to the batching and mixing plant, the stationary mixer/mixers of capacity 700 litres of mixed concrete and other appropriate equipment shall be provided.

(b) Type of Plant

The type of plant to be furnished shall be fully automatic. The term “automatic” is used to define a plant in which:

Batch weights are set manually on a mix selector
Mixes are charged automatically by mix selector
Materials are batched automatically

Ice flaking machine of sufficient capacity shall be installed as a part of batching plant.

(c) Batchers

Individual weigh batchers shall be provided for all works, requiring the use of more than two separate size groups of coarse aggregates. Cumulative weight batchers may be used for work requiring the use of not more than two separate size groups of coarse aggregates provided that the cement is weighed and batched separately from the aggregates. The batchers shall be arranged to permit the convenient addition or removal of material. Batching equipment shall be so constructed and arranged that the sequence and time of discharge can be controlled to produce a re-blending and mixing of the aggregates and, wherever possible, mixing of the cement with the aggregates as the materials pass through the charging hopper in to the mixer. This control shall be effected by the controls of the batcher discharge gates. Batcher controls shall be so interlocked that a new batching cycle cannot be started until all batchers are completely empty.

(i) Weighing Units

Every delivering point of aggregates and cement into the mixer, charging hopper shall have a weighing unit and each weighing unit shall include a visible, springless direct reading dial which shall indicate the scale load at all stages of the weighing operation from zero to full capacity.

The scale dials and the weighing equipment shall be in full view of the operator, so that he may conveniently observe the operation of the batcher gates and the discharge of the materials. Provision shall be made for adjustment and change in weights of materials being charged in the hopper.

(ii) Measuring Water

Water shall be measured by weight except in situations for which written approval is given

by the Engineer to measure by volume. The mechanism for measuring and delivering water to the mixers shall not permit leakage when the valves are closed.

The filling and discharge shall be measured by weight. The filling shall be capable of ready adjustment to permit varying the quantity of the admixtures to be batched. The equipment shall be kept in a clean and fully operating condition.

(iii) Tolerance in Batching

Weighing devices shall be capable of measuring the various ingredients of the following accuracy.

Materials	Percent (by weight)
Cement	1
Water	1
Aggregate smaller than 40mm size	2
Admixture	1 (or volume)

(iv) Records & Charts

An accurate record shall be maintained at the batching plant by the Contractor for the following:

The weight of the cement, water and admixture
The weight of the aggregate for each size shall be recorded separately.
Temperature of the concrete immediately after mixing
Mixing time of each batch when all the materials are loaded into the mixer
Time when the concrete is delivered from the mixer
Ambient temperature

(v) Recorders

A recorder shall be provided for each set of units measuring each of the materials delivered to the mixer. The recorder shall produce a continuous visible record, on a single ruled chart, of the weight of the cement, water and each size of aggregates, of the mixing time of each batch after all materials are in the mixer, of the temperature of the concrete and of the time of day at intervals of not more than fifteen (15) minutes. The recorder shall be completely housed and shall be capable of being locked and shall be placed in a position convenient for observation by the plant operator and the Engineer. Each chart shall be so ruled and printed that it may be readily and permanently identified, so that the quantities and time may be read directly without scaling or calculation. A portion of the recorder chart equivalent to at least thirty (30) minutes of plant operation shall be visible after recording. This portion of the chart shall be supported over its entire width on a smooth, firm backing so that notes can be made without puncturing the paper. The recorders and scale dials shall be housed in a room, box or compartment visible at all times and sufficiently tight to exclude objectionable dust coming from the plant operation.

2000 ROAD FURNITURE

2001 Road Reserve Boundary Posts

The Contractor shall establish a reference point on top of each boundary post.

2004 Permanent Road Signs

Rename the existing text with the heading "2004.1 Posts and Road Signs"

2004.1 Posts and Road Signs

Posts for road signs shall be vandal-proofed by the drilling of 3 mm diameter holes at 100 m centres on alternative sides.

Add the following to this clause:

2004.2 Colour and configuration

The colour, size and location of all traffic signs for the project road shall be as specified on the drawings and in the absence of any details or any missing details, the signs shall be provided as directed by the Engineer.

The sign shall be reflectorised as shown on the drawings or as directed by the Engineer. The signs shall be of retro-reflective type and made of prismatic reflected sheeting fixed over aluminium sheeting as per these specifications.

The cautionary and mandatory signs shall be fabricated through the process of screen-printing. With regard to informatory signs with inscriptions, the message shall be of cut out letters made in the transparent overlay film pasted over the base sheeting with pressure sensitive adhesive or as the base sheeting with pressure sensitive adhesive or as instructed by the manufacturers or as directed by the Engineer.

2004.3 Material

The various materials and fabrication of the traffic signs shall conform to the following requirements:

(a) Concrete

Concrete shall be of the grade shown on the Contract drawings or otherwise as directed by the Engineer.

(b) Reinforcing Steel

Reinforcing steel shall conform to the requirement of the relevant codes as directed by Engineer unless otherwise shown on drawing.

(c) Bolts, nuts, washers

High strength bolts, precision bolts and nuts shall conform to the relevant specifications. The bolts and nuts shall be galvanised (zinc coated, 0.55 kg/m^2 minimum single spot) and galvanising shall conform to the relevant specifications.

(d) Plates and supports

Plates and support sections for the signposts shall conform to the relevant specifications. The plates and supports shall be galvanised (zinc coated, 0.55 Kg/m^2. minimum single spot.) and galvanising shall conform to the relevant specifications.

(e) Aluminium

Aluminium sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy conforming to the relevant specification. The back of the sheet shall be painted with two coats of Epoxy paint.

The thickness of the sheet shall be 3 mm for all types of signs.

2004.4 Structural Details
The structural details for supports shall be as per the Contract drawings and/or as directed by the Engineer.

2004.5 Retro-reflective Sheeting
(a) General Requirements

The retro-reflective sheeting used on the sign shall consist of the white or coloured sheeting having a smooth outer surface, which has the property of retro-reflective over its entire surface. It shall be unused and shall show no evidence of cracking, scaling, pitting, blistering, edge lifting or curling and shall have negligible shrinkage or expansion. A certificate of having tested the sheeting for these properties in an unprotected outdoor exposure facing the sun for two years and its having passed these tests shell be obtained from a reputed laboratory of the manufacturer of the sheeting, for each lot separately.

The reflective sheeting shall be of prismatic lens type OF ASTM - Type-IX.

(b) Lens Type

The retro-reflective sheeting shall be of Prismatic lens type, consisting of cube corner lenses and pressure sensitive adhesive and should be applied to the sign substrate at room temperature of 18 ^{o}C, transparent, waterproof plastic having smooth surface. The coefficient of retro-reflective as determined in accordance with ASTM Standard E- 810 shall give the minimum values as indicated in table given below.

Minimum Coefficient of Retro-reflection for Retro-reflective sheeting Prismatic Lens Type (candelas/lux/m^2)

Obtuse Angle (°)	Entrance Angle (°)	White	Yellow	Green	Red	Blue
0.1	-4	660	500	66	130	30
0.1	+30	370	280	37	74	17
0.2	-4	380	285	38	76	17
0.2	+30	215	162	22	43	10
0.5	-4	240	180	24	48	11
0.5	+30	135	100	14	27	6
1.0	-4	60	60	8	16	3.6
1.0	+30	45	34	4.5	9	2

When totally wet, the sheeting shall not show less than 90% of the values of retro-reflectance indicated in table above. At the end of 7 years, the sheeting shall retain at least 75% of its original retro-reflectance.

2004.6 Messages and Borders

The messages (legends, letters and numerals) and borders of Cautionary/Regulatory sign boards shall be screen printed. Screen printing shall be processed and finished with materials in a manner specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer.

The messages (legends, letters and numerals) and borders of information signs shall be of cut letters made in transparent overlay film pasted over the base sheeting with pressure sensitive adhesive or as instructed by the manufacturers or as directed by the Engineer.

For screen printed transparent coloured areas on white sheeting, the co-efficient of retro-reflection shall not be less than the values of corresponding colour in the table above.

Cut-out messages and borders, wherever used, shall be made in transparent film applied on base sheeting with pressure sensitive adhesive with the coefficient of retro-reflection which shall not be less than the values of corresponding colour in the table above. For the background colour of the sign the coefficient of retro-reflection shall not be less than that specified in the table above for the respective colours.

2004.7 Colour

The colour shall be as specified and shall conform to the requirements of the table below. Conformance to colour requirements shall be determined spectrophotometrically in accordance with ASTM E 1164, with instruments utilizing either 45/0, or 0/45 illumination/viewing conditions and tolerances as described in ASTM E 1164 for retro-reflective materials.

Conformance to Colour Requirements

								Reflectance Limit (y)		
Colour	x	y	x	y	x	y	x	y	Min	Max.
White	.30	.3	.35	.35	.33	.37	.28	.32	40.0	
Yellow	.48	.42	.54	.45	.46	.53	.42	.48	24.0	45.0
Red	.69	.31	.59	.31	.56	.34	.65	.34	3	15
Blue	.07	.17	.15	.22	.21	.16	.13	.03	1.0	10.0
Green	.03	.39	.16	.36	.28	.44	.20	.79	3.0	9.0

The four pairs of chromaticity coordinates determine the acceptable colour in terms of CIE 1931 standard colorimetric system measured with standard illumination source D65. These colours are equivalent to those listed in ASTM D4956 using source C.

The colour shall be durable and uniform in acceptable hue when viewed in daylight or under normal headlights at night.

2004.8 Adhesives

The sheeting/film shall have a pressure sensitive adhesive of the aggressive tack type requiring no heat, solvent or other preparation for adhesion to a smooth clean surface. The

adhesive shall be protected by an easily removable liner (removable by peeling without soaking in water or other solvent) and shall be suitable for the type material of the base plate such that it shall not be possible to remove the sheeting from the sign base in one piece by use of sharp instrument. The adhesive shall form a durable bond to smooth, corrosion and weather resistant surface of the base plate. In case of pressure sensitive adhesive sheeting, the sheeting shall be applied in accordance with the manufacturer's specifications.

2004.9 Fabrication

The surface to be reflectorized shall be effectively prepared to receive the retro-reflective sheeting. The aluminum shall be de-greased either by acid or hot alkaline etching and all scale/dust removed to obtain a smooth plain surface before the application of retro-reflective sheeting. If the surface is rough, approved surface primer may be used. After cleaning, the metal shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of reflective sheeting/primer. There shall be no opportunity for the metal to come in contact with any contaminants prior to the application of retro-reflective sheeting.

Complete sheets of the material shall be used on the signs except where it is unavoidable. At splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Where screen printing with transparent colours is proposed, only butt jointing shall be used. The material shall cover the sign surface evenly and shall be free from twists, cracks and folds. The transparent overlay film in which cut-out messages have been made shall be bonded with sheeting in the matter specified by the manufacturer.

2004.10 Warranty and Durability

The Contractor shall obtain from the manufacturer a seven year warranty for satisfactory field performance including stipulated retro-reflectance of the retro-reflective sheeting of Prismatic lens type and that of transparent film and submit the same to the Engineer. In addition, a seven year warranty for field satisfactory performance of the finished signs with retro-reflective sheeting of Prismatic lens type, inclusive of the screen printed or cut out letters/legends, transparent film and their bonding to the retro-reflective sheeting shall be obtained from the contractor/Supplier and submitted to the Engineer. The Contractor/Supplier shall also furnish a certification that the signs and materials supplied against the assigned work meets all the stipulated requirements and carry the stipulated warranty.

Warranties shall be given in original and shall have legal jurisdiction in Kenya. Warranties given by power of attorney holders will not be acceptable.

Processed and applied in accordance with recommended procedures, the reflective material shall be weather resistant and, following cleaning, shall show no appreciable discoloration, cracking, blistering or dimensional change and shall not have less than 50 % of the specified minimum reflective intensity values, given in the table under Clause 2004.4 (b) above, when subjected to accelerated weathering for 1000 hours, using type E or EH weathrometer (AASHTO Designation M-268).

2004.11 Installation

Sign posts, their foundation and sign mountings shall be so constructed as to hold these in a proper and permanent position. Sign supports shall be of galvanised structural steel and shall be firmly fixed to the ground by means of properly designed foundation or as shown on the Contract Drawings. The work of the foundation shall conform to the relevant clauses of the

Standard Specification.

All components of the signs and supports, excluding the back side of aluminium sheet and the reflective portion, shall be thoroughly scaled, cleaned and galvanised (zinc coated, 0.55 Kg/m^2. minimum single spot.) and shall conform to the relevant specifications.

The signs shall be fixed to the posts by welding and/or bolts and washers as shown on the drawing. After the nuts have been tightened, the tails of the bolts shall be furred over with a hammer to prevent removal.

2004.12 Foundation for Support

The foundation for the supports of the sign boards with single support shall be by making excavation in all type of strata to the sizes and level as shown on the relevant drawings and fixed with class 20/20 cement concrete during installation.

The foundation for the supports of the sign boards with two or more supports shall be made by boring holes in all types of strata to the sizes levels as shown on the relevant drawings and fixed with class 20/20 cement concrete during installation. All concrete works shall be carried out as per the relevant specifications.

2004.13 Measurement for Payment

The measurement of standard cautionary and mandatory sign boards shall be in numbers of sign boards supplied and fixed and this shall constitute full payment for the supply of all materials for the sign board and its supports and foundations, fabrication and installation in the ground or embankment as per the specifications. Informatory sign boards with board area exceeding 1.0 m^2. shall be measured by area of the reflectorised sheet in square meters.

2004.14 Rate

The Contract unit rate shall be payment in full for the cost of making the road sign including supports and foundations, including all materials, installing it at the site and incidentals to complete the work in accordance with the specifications. In case of overhead sign boards supported on overhead gantry the rate shall not include the support gantry, its foundation and erection which shall be paid separately.

2005 Road Marking

Road marking paints shall be hot applied thermoplastic materials as specified under Clause 219 of the Standard Specification.

2006 Guardrails

Add the following to this clause:

2006.1 Removing, Renovating and Re-erecting Guardrails

Where the existing guardrails have to be removed, or removed and re-erected, or removed, renovated and re-erected, the three processes of removal, renovation and re-erection shall be carried out as follows:

(a) Removing the Guardrails

All guardrails and end units shall be loosened. Posts shall be carefully dug out and the holes shall be filled and compacted in 150 mm layers. Items used for fixing, including bolts, nuts, washers, shall be placed in bags, after which all materials shall be transported to a store approved by the Engineer and all stored in-groups by type.

Where material is intended for re-use, it shall first be unpacked for inspection by the Engineer. The Engineer will decide which material that shall be disposed off if, on inspection it is found unsuitable for re-use.

(b) Renovating the Guardrails

Guardrails and end pieces suitable for re-use shall be taken to the workshop for cleaning and painting. Rust and the existing paint shall be completely removed and minor indentations hammered out. The guardrails shall receive surface treatment in accordance with Clause 2006 of the Standard Specification.

Timber posts suitable for re-use shall be cleaned and treated with an approved timber preservative. Bolts nuts and washers to be re-used shall be cleaned and all dust removed, and shall then be oiled.

(c) Re-erection

The guardrails shall be erected in positions as shown and all the removed materials suitable for re-use and as much supplementary new materials as may be necessary shall be used. Re-erection shall be as specified for new guardrails.

2006.2 Pedestrian Railing

Pedestrian safety barriers shall comply with the requirement of BS 3049. The steel tubing and wire mesh shall be primed with zinc chromate or equal suitable for galvanizing, undercoat and finished with not less than two coats of permanent outdoor enamel of white paint.

2007 Kerbs

Name the existing text with the head as “2007.1 Installation”.

Add the following to this clause:

2007.2 Existing Kerbs

Where shown on the drawing or directed by the Engineer, the Contractor shall remove the existing road kerbs and channel, including bed and haunches. Care shall be taken to minimize over break into the existing pavement. The Contractor shall reinstate any over break with a lean concrete or such other materials as may be approved by the Engineer.

2007.3 Repair of Damaged Railing and Kerbs

The repair of damaged railing shall be done by replacement of damaged pipes and posts. The damaged kerbs shall be repaired by cement mortar.

(a) Materials as per Relevant Codes

Ordinary Portland cement
Coarse aggregate and fine aggregate
Tor steel
Water suitable for concreting
MS steel sections and pipes
Zinc rich epoxy primer like Nitrozinc primer or any approved equivalent and epoxy coal tar.

(b) Equipment

Welding equipment
Painting/white washing brushes
Other miscellaneous equipment
(c) Procedure

The damaged portion of steel/RCC rating shall be removed up to the unaffected portion of the railing and the parent remaining parts which have to be connected with new components shall be thoroughly cleaned.

In case of RCC railing, the casting of new units shall be carried out by adopting standard practice of construction using all necessary care. The newly constructed RCC components shall be cured as per standard practice of curing by water. The dried up and cured concrete shall be white/colour-washed with proper care to match with the existing colours.

In case of MS pipe railing, the new components or repaired components shall be fixed with necessary care keeping in consideration the alignment and level. The railing components shall then be painted with zinc rich epoxy based primer and finishing with two coats tar epoxy or paint to match the existing colour including cleaning and surface preparations as directed by the Engineer.

The damaged kerbs shall be repaired with cement mortar and the cement mortar shall be cured as per the standard practice. The kerbs shall then be painted black and yellow in alternative bands with reflecting paint of specification and quality approved by the Engineer to give an even shade on work as per the Standard Specification.
2010 Trees
Add the following to Clause 2010 of the Standard Specification:

2010.1 Plantation of Trees and Hedges
(a) Scope

The work shall consist of:

Planting of tree saplings in median or other designated locations, and
Planting of hedges within median area.

(b) Materials

(i) Dump Manure

Dump manure shall be of well decayed (at least six months) organic or vegetable matter, obtained in the dry state from the municipal dump or other similar sources approved by the Engineer. The manure shall be free from earth, stone, brickbats or other extraneous matter.

(ii) Farmyard Manure

Farmyard Manure shall be well decayed (should be at least 6 months covered in dump), free from grits and any other unwanted materials.

(iii) Good Earth

The soil shall be agricultural soil of sandy-loam texture, free from grit, marrum, shingle, stone, brickbats, building rubbish and any other foreign matter. The earth shall be free from clods or lumps of sizes bigger than 75 mm in any direction. It shall have PH value ranging between 6 and 8.5.

(iv) Oil Cake (Neem/Castor/Groundnut)

The cake shall be free form bush, dust, grit and any other foreign matter.

(v) Sapling of Trees

The sapling of trees shall be of medium height, leafy type and draught resistant variety native to the area and be of good quality of minimum of 2 m height or calliper diameter of 25 mm as directed by the Engineer.

(vi) Sapling of Hedges

The saplings shall be of draught resistant variety normally grown for hedges in the area, approved by the Engineer.

(c) Construction Operations

(i) Tree Planting and Refilling Earth after Mixing with Oil Cake, Manure and Watering

Holes of circular shape of 900 mm diameter and 1000 mm in depth in ordinary soil shall be excavated and the excavated soil, broken to clods of sizes not exceeding 75 mm in any direction, shall be stacked outside the hole. Stones, brickbats, unsuitable earth and other rubbish, all roots, weeds and other undesirable growth encountered during excavation shall be separated out and unserviceable material removed from the site as directed by the Engineer.

Useful material, if any, shall be stacked properly and separately. Good earth in quantities required to replace such discarded stuff shall be brought and stacked at site by the Contractor, with a depth not more than 500 mm from ground level. The pit shall be treated for termite by raking the soil up to 50 mm and treated with 5% Aldrin or Chloradang dust in soil.

The tree hole shall be manured with powdered neem/castor oil cake along with farm yard manure/dump manure screened through 16 mm sieve and these shall be uniformly mixed with the excavated top soil after the manure has been broken down to powder (size of particles not to exceed 6 mm in any direction) in equal proportion. A 2 m high sapling of trees shall be placed at the centre of the hole and then the mixture shall be filled into the hole up to the level of adjoining ground and then profusely watered to enable the soil to subside. The refilled soil shall then be dressed evenly with its surface about 50 mm to 75 mm below the adjoining ground level or as directed by the Engineer.

The planting shall be completed soon after completion of the median.

(ii) Circular Mild Steel Tree Guard with Bars

The tree guard shall be 900 mm in diameter.

The tree guards shall be formed of:

3 № 25 mm x 25 mm x 3 mm angle iron verticals 1.95 m long excluding splayed outward at lower end up to an extent of 50 mm
3 № 25 mm x 5 mm MS flat rings fixed as per the design
5 № 1.55 m long 6 mm diameter bars. Each ring shall be in two parts in the ratio of 1:2 and their ends shall be turned in radically for a length of 40 mm at which they are bolted together with 8 mm diameter and 30 mm long MS bolts and nuts.

The vertical iron shall be welded to rings along the circumference with electric plant. 15 № bars shall be welded to rings at equal spacing along the circumferences of ring. The lower end of the angle iron verticals shall be splayed outwards up to an extent of 50 mm. The lower end of the flat of lower ring shall be at the height of 1.95 m. The middle ring shall be in the centre of top and lower ring. The bars shall be welded to the rings as directed by the Engineer. The entire tree guard shall be given two coats of paint of approved brand and of required shade over a priming coat of ready mixed primer of approved brand. The design of the tree guard shall be approved by the Engineer.

(iii) Planting of Hedges

The hedges saplings shall be planted in two rows, one each along each edge of the median. Bed for the saplings shall be prepared with necessary manuring, and the live saplings shall be planted in lines parallel to the median edge to the directions of the Engineer. Spacing between saplings in a row shall be such that a thick hedge can be grown, and this shall generally be not farther away than 300 mm.

The planting shall be completed soon after completion of the medians.

(iv) Grassing of Median Area

The area of the median between the hedges shall be seeded and mulched to develop grass cover as directed by Engineer.

(d) Maintenance

The saplings of trees and hedges planted shall be watered and maintained by the Contractor till issuance of the final certificate at the end of the Defects Liability Period. This shall also include watering, weeding out of undesirable plants and replacement of dead plant, manuring and trimming of the hedges.

Add the following clauses to this section:
2012 Service Ducts beneath Roads
Where instructed by the Engineer, the Contractor shall construct service ducts beneath the carriageway and shoulders/footpaths. The ducts shall consist of 100 mm to 300 mm diameter ogee precast concrete pipes surrounded by a minimum of 100 mm thickness of Class 15/20 concrete. The minimum clearance between the road formation and the top of the concrete surround shall be 100 mm.

The ducts shall be provided with draw cords fabricated from strong man-made fibre such as nylon and each duct shall be sealed at each end with a tight fitting plastic plug. In the existing pavement, the duct shall be at least 250 mm below the road surface measured from the top of the concrete pipes and all back filling shall be in Class 15/20 concrete. The concrete pipes shall conform to the requirements of Clause 215 of the Standard Specification.

2013 Duct Markers

Duct markers shall be installed by the Contractor at each end of the services ducts provided under Clause 2012 above. The duct marker shall be located immediately beyond the outer edge of the shoulder or footpath and as close to the line of the duct as physical constraints permit. Where several ducts are laid side by side, only one duct marker post will be necessary. The duct marker posts shall be constructed as shown on the drawings and shall be clearly and durably marked on the side facing away from the road. The marker shall be inscribed 'X DUCTS' where X is the number of ducts stated in the group marked by the marker posts.

2014 Road Bump and Rumble Strips

Where shown on the Drawings or instructed by the Engineer, the Contractor shall provide, place trim to line and level bumps and/or rumble strips on the carriage way, connecting roads or shoulders. Where instructed, the road bumps shall extend the full width of carriageway and shoulders. The bumps shall be constructed in asphalt concrete to the dimensions shown on the Drawings and to the same standard as the wearing course on the main carriageway.

2015 Bollards

Where shown on the Drawings or instructed by the Engineer, the Contractor shall construct permanent bollards. The bollards shall be gauge 16 steel pipe Bollards of diameter minimum 150mm and 1.0 m above the ground, embedded to a depth of 0.5m at place. The bollards shall be filled using a minimum class (15/20) concrete and as shown on the Drawings.

2016 Retro-Reflective Road Studs

All retro-reflective road studs shall comply with BS 873: Part 4. The Contractor shall submit details of the reflective road studs he proposes to use in the works to the Engineer for approval. The Contractor shall submit also a Certificate of approval from an approving authority. The reflective road studs shall be installed in the locations shown on the drawings or instructed by the Engineer.

2017 Measurement and Payment

(a) Item: Remove existing guardrail

Unit: m

Removal of guardrail shall be measured by the metre as the length of guardrail instructed to be removed, measured between terminal points of the sections removed. The rate shall include for loading, transporting to any point on the site, off-loading and stacking the material and disposing off material unsuitable for re-use.

(b) Item: Renovate and re-erect guardrails

Unit: m

The unit of measurement shall be the length of single guardrail, whether straight or bent, or end pieces renovated as specified. The rate shall include for all works as specified and storage as required. The rate shall also include for erecting the guardrails in accordance with Clause 2006 and any new poles, nuts, bolts and accessories that may be required.

(c) Item: Pedestrian railing

Unit: m

Pedestrian railing shall be paid by the length instructed by the Engineer. The rate shall include for supplying and erection in accordance with the drawings. It shall also include for any bending of end pieces as may be required, disposal of excess materials and tidying up the site after completion of installation.

(d) Item: Service ducts

Unit: m

Service ducts stall be measured by the metre as the length of duct installed as per the Engineer's instructions. The rate shall include for providing all materials, excavation, and installation of concrete pipes with concrete surround, backfilling to formation level, compaction, draw-cords and plugs, all in accordance with Clause 2012 above.

(e) Item: Duct markers

Unit: №

Duct markers posts shall be measured by the number installed. The rate shall include for provision and installation of posts, all excavation and backfill, compaction to the satisfaction of the Engineer and removal of surplus materials.

(f) Item: Bollards

Unit: №

Bollards shall be measured by the number installed. The rate shall include for provision and installation of bollards, all excavation and backfill, compaction to the satisfaction of the Engineer and removal of surplus material.

(g) Item: Reflective road studs

Unit: №

Retro-reflective road studs shall be measured by the number installed. The rate shall include for provision and installation of studs to the manufacturer's recommendations and satisfaction of the Engineer.

(h) Item: Road Bumps

Unit: m^3 of each type

2200 DAY WORKS

2201 Scope

This specification covers instructions that may be issued by the Engineer as additional or substituted work to be executed on a day work basis by the Contractor or by his sub-contractors.

2202 Standards

All codes and standards mean the latest. Where not specified otherwise the installation shall generally follow the Kenyan Standard Specification for Road and Bridge Construction

2203 Measurement and Payments

Measurement and payment for all day works items shall be in accordance with the items listed in the Bill of Quantities, the preamble to Bill of quantities and the specifications above and cover the payment of plant, labour and materials for work executed in accordance with the Engineer’s instructions.

2400 TRAFFIC MANAGEMENT AND DIVERSION

2401 General

The Contractor shall prepare and submit to Engineer within one month of the date of commencement of the works a detail traffic diversion plan as per the requirement of traffic authorities. The Contractor shall have to carry out the modifications in the traffic diversion plan at various stages of work as required. The Contractor shall maintain liaison with the traffic/highway police/authorities so as to ensure smooth flow of traffic at all stages of the work without causing inconveniences to the traffic.

2402 Traffic Rotary

The Contractor shall provide traffic rotary showing traffic direction made up of four blinders mounted on M.S. Frame of 5-x50 mm x 6 mm size 250 Hz frequency electrically operated at both ends of the cordoned area for help and guidance of road users. Necessary arrangements for supply of electricity shall be made by the Contractor.

2403 Road Delineates

Road delineates as per the relevant codes and as per the relevant drawings and as directed by Engineer shall be fixed at suitable intervals to have a suitable guidance to the road users at the night time for smooth flow of traffic. Delineators shall be fixed firmly in the ground. Also, red flags and cat eye reflectors shall be fixed on the barricades. Alternative arrangements shall also be kept ready in case of failure of electricity.

2404 Signs, Lights, Barriers and other Traffic Control Devices

Signs, lights, barriers and other traffic control devices shall be provided and maintained in a satisfactory condition till such time that they are not required as directed by the Engineer, so as to ensure smooth and safe traffic on the road throughout the length of the project road.

2405 Barricades

The barricades erected on either side of the carriageway/portion of the carriageway closed to traffic, shall be of strong design to resist violation, and painted with alternate black and white stripes. Red lanterns or warning lights of similar type shall be mounted on the barricades at night and kept lit throughout from sunset to sunrise.

At the points where traffic is to deviate from its normal path, whether on temporary diversion or part width of the carriageway, the channel for traffic shall be clearly marked with the aid of pavement markings, painted drums or similar devices to the directions of the Engineer. At night, the passage shall be delineated with lanterns of other suitable light source.

2406 Passage through Works

2406.1 One-Way Traffic Operation

One-way traffic operation shall be established whenever the traffic is to be passed over part of the carriageway inadequate for two-lane traffic. This shall be done with the help of temporary traffic signals or flagmen kept positioned on opposite sides during all hours. For regulation of traffic, the flagmen shall be equipped with red and green flags and lanterns/lights.

2406.2 Two Way Traffic Operation

On both sides, suitable regulatory/warning signs as approved by the Engineer shall be installed for the guidance of road users. On each approach, at least two signs shall be put up, one close to the point where transition of carriageway begins and the other 120 m away. The signs shall be of approved design and of refectory type, if so directed by the Engineer.

2406.3 Traffic Control Devices

Signs, lights, barriers and other traffic control devices, as well as the riding surface of diversions shall be maintained in a satisfactory condition till such time that they are not required as directed by the Engineer. The temporary travelled way shall be kept free of dust by frequent applications of water as necessary.

The details of work which is to be carried out by the Contractor as part of the traffic management during the construction period are given under Bill № 9 of the Bill of Quantities.

SECTION VI – BILLS OF QUANTITIES

A. BILLS OF QUANTITIES FOR CONSTRUCTION 4 CELL BOX CULVERTS AT ADEMASAJIDA

1. The Bills of Quantities for Proposed Construction 4 Cell Box Culverts at Ademasajida 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 Proposed Construction of 4 Cell Box Culverts at Ademasajida that are to be provided on a price and rate basis for the works 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.

Proposed Construction of 4 Cell Box Culverts at Ademasajida

BILLS OF QUANTITIES FOR CONSTRUCTION OF 4 CELL BOX CULVERTS AT ADEMASAJIDA					
Bill of Quantities					
Item No.	Description	Units	Quantity	Unit Rate(Ksh)	Amount KSh
BILL 1:	**PRELIMINARY AND ADMINISTRATION OVERHEADS**				
01.80.007	Prime cost sum for Partitioning, furnishing, equipping and maintenance of Resident Engineer's Office including furniture as directed and as per the Special Specifications.	PC SUM	1.00	100,000.00	100,000.00
01.80.008	Include percentage of P.C Sum in item 01.80.007 for Contractors overhead and profit	%	100,000.00		
01.80.010	Allow a provisional Sum for Material testing Services, reagents, equipment and other Laboratory Services.	PC SUM	1.00	100,000	100,000
01.80.011	Include percentage of P.C Sum in item 01.80.010 for Contractors overhead and profit	%	100,000.00		
01.80.026	Allow a provisional Sum of Kshs. 100,000 for the Resident Engineer's Miscellaneous account to be spent in whole or part as directed by the Resident Engineer against receipts.	PC SUM	1.00	100,000	100,000
01.80.027	Include percentage of PC Sum in Item 01.80.026 for Contractor's overheads and profit	%	100,000.00		

01.80.030	Allow Kshs 200,000 for attendance of the Engineer's Site Staff including wages and overtime in accordance with clause 137 of special specifications.	PC SUM	1.00	200,000	200,000
01.80.031	Include percentage of PC Sum in Item 01.80.030 for Contractor's overheads and profit	%	200,000.00		
Total Carried Forward to Summary:					
BILL 4:	SITE CLEARANCE				
04.80.002	Remove top soil to maximum depth of 200mm as directed by the Engineer	M^3	500.00		
04.50.006	Tree cutting and stump removal (200 -450 mm)	M^3	20.00		
	Total Carried Forward to Summary:				
Bill 5:	EATHWORKS				
05.50.008a	Cut to spoil in Soft material	M^3	500.00		
05.50.009a	Cut to spoil in Hard	M^3	40.00		
05.60.016	Fill in soft material including benching of shoulders and embankments and compaction to100% MDD (AASHTO T99) in layers not exceeding 150mm	M^3	800.00		
05.60.017	Provide improved sub grade material (CBR >14%) to a thickness of 450mm a compaction of 100% MDD (AASHTO T99)	M^3	1,000.00		

05.60.014	Compaction of the top 150mm below formation level in cuts and fills (subgrade) to 100% MDD	M^3	800.00		
05.60.016	Scarification and Compaction of original ground to 95% MDD (AASHTO T99)	M^3	800.00		
05.50.125	Provide rockfill to road embankment including compaction	M^3	800.00		
05.50.012	Provide and place filter fabric as shall be specified	M2	200		
	Total Carried Forward to Summary:				
BILL 7:	EXCAVATION AND FILLING FOR STRUCTURES				
07.50.001a	Excavation for structures in soft material	M^3	600.00		
07.50.002a	As item 7.01 but in hard material.	M^3	132.00		
07.70.004	Provide and place gabion boxes and mattresses as specified or as directed by the Engineer	$M2$	759.00		
07.70.005	Provide, place and compact rockfill below structures as directed by the Engineer.	$M2$	2,400.00		
07.70.001	Provide cement grouting to gabions faces as instructed	$M2$	350.00		
	Total Carried Forward to Summary:				
BILL 9:	PASSAGE OF TRAFFIC				
09.60.001	Construct and maintain 4m wide temporary vehicle deviation	Km	1.00		
	Total Carried Forward to Summary:				

BILL 10:	GRADING AND GRAVELLING				
10.50.002	Trim with Motor Grader or heavy towed grader existing carriageway surface to camber, including slopes and ditches providing watering and compaction	M2	1,500.00		
10.60.001	Prepare for road formation and provide, place spread, shape and compact with watering gravel as specified	M^3	400.00		
	Total Carried Forward to Summary:				
BILL 17:	CONCRETE WORKS				
17.60.001	Provide and place 50mm thick class 15/20 concrete blinding to structures	M^3	40.00		
17.60.002a	Provide, place and compact class 30/20 concrete for superstructure elements	M^3	380.00		
17.60.005	Vertical framework class F1 finish	M2	350.00		
17.60.006	Horizontal framework class F1 finish	M2	350.00		
17.80.005	Provide, cut bend and fix into position high yield reinforcement bar to BS 4461 as directed and as shown on the drawing.	Ton	60.00		
	Total Carried Forward to Summary:				
BILL 20:	**ROAD FURNITURE**				
20.70.004	Permanent road informatory signs.	No.	2.00		
	Total Carried Forward to Summary:				
BILL 21:	MISCELLANEOUS BRIDGE WORKS				

21.50.017	Provide and Spray MC 30 cut-back bitumen as prime coat at rate 0.8-1.2 litres/m2 as prime coat	L	200.00		
21.50.043	Pipe handrails to culvert	M	100.00		
21.50.042	Guardrails to culvert	M	120.00		
21.60.021	Weepholes	M	60.00		
	Total Carried Forward to Summary:				
BILL 25:	CROSSS CUTTING ISSUES				
25.50.029b	Provide, erect and maintain publicity signs as instructed by the Engineer	No.	1.00		
	Total Carried Forward to Summary:				

	SUMMARY	
BILL NO.	**Item Description**	**Amount (KShs)**
1	PRELIMINARY AND ADMINISTRATION OVERHEADS	
4	SITE CLEARANCE	
5	EATHWORKS	
7	EXCAVATION AND FILLING FOR STRUCTURES	
9	PASSAGE OF TRAFFIC	
17	CONCRETE WORKS	
20	ROAD FURNITURE	
21	MISCELLANEOUS BRIDGE WORKS	
25	CROSS CUTTING ISSUES	
	Sub- total 1	
	Add VAT @ 16 %	
	Add 0.03% ppra levy	
	Total Carried to page on the Form of Tender	

Amount in Words

……

……

……

Tenderer's Official Stamp

Signed: _____

(Contractor)

Address: _____

Date: _____

Witness: _____

Signed: _____

Address: _____

Date: _____

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VIII A. CONDITIONS OF CONTRACT

PART I: GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract Part 1 – General Conditions shall be those forming Part 1 of the Conditions of Contract for works of Civil engineering construction Fourth Edition 1987, reprinted in 1992 with further amendments, prepared by the Federation Internationale des Ingenieurs Conseils (FIDIC)

Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat

P.O. Box 86

1000 Lausanne 12

Switzerland

Fax: 41 21 653 5432

Telephone: 41 21 653 5003

SECTION VIII B. CONDITIONS OF CONTRACT
PART II: (CONDITIONS OF PARTICULAR APPLICATION)

The following Conditions of Particular Application shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The Particular Condition is preceded by the corresponding clause number of the General Conditions to which it relates.

CONDITIONS OF CONTRACT PART II (CONDITIONS OF PARTICULAR APPLICATION)

SUBCLAUSE 1.1 – DEFINITIONS

Amend this sub-clause as follows:

(i) The "Employer" is the Department of Roads and Transport, represented by the Chief Officer - Department of Roads and Transport.

(iv) The "Engineer" is the Senior Superintending Engineer - Department of Roads and Transport

(v) The "Engineer Representative" is the Deputy Director Trunk Network Coordination

(a) (i) Insert in line 2 after the Bills of Quantities", the following, "the rates entered by the Contractor (whether or not such rate be employed in computation of the Contract Price),"

Amend subparagraph (b) (v) of Sub-Clause 1.1 by adding the following words at the end:

The word "Tender" is synonymous with "bid" and the word "Appendix to Tender" with "Appendix to Bid" and the word "Tender documents" with "bidding documents".

Add the following at the end of this sub-clause:

(h) (i) "Materials" means materials and other things intended to form or forming part of the Permanent Works.

SUBCLAUSE 2.1 - ENGINEER'S DUTIES AND AUTHORITY.

With reference to Sub-Clause 2.1 (b), the following shall also apply: The Engineer shall obtain the specific approval of the Employer before taking any of the following actions specified in Part 1:

(a) Consenting to the subletting of any part of the works under Clause 4;

(b) Certifying additional cost determined under Clause 12;

(c) Determining an extension of time under Clause 44;

(d) Issuing a variation under Clause 51;

(e) Fixing rates or prices under Clause 52

(f) The works specified under this Contract shall be executed, supervised and evaluated in accordance to the Contract Supervision and Evaluation Manual developed by the Ministry of Roads – Version 2012

SUBCLAUSE 5.1 - LANGUAGE AND LAW

The Contract document shall be drawn up in the ENGLISH LANGUAGE. Communication between the Contractor and the Engineer's Representative shall be in this given language.

The Laws applicable to this Contract shall be the Laws of the Republic of Kenya.

SUBCLAUSE 5.2 – PRIORITY OF CONTRACT DOCUMENTS

Delete the documents listed 1-6 and substitute:

(1) The Contract Agreement (if completed)
(2) The Letter of Acceptance;
(3) The Bid and Appendix to Bid;
(4) The Conditions of Contract Part II;
(5) The Conditions of Contract Part I;
(6) The Special Specifications;
(7) The Standard Specification for Road and Bridge Construction, 1986;
(8) The PBC Guidelines Edition 1.1 of February;
(9) Road Maintenance Manual, May 2010 Edition and Performance Based Contract Manuals.
(10) The Drawings;
(11) The priced Bills of Quantities
(12) Other documents as listed in the Appendix to form of Bid

SUBCLAUSE 8.2 - Site Operations and Method of Construction

Add

The Contract may be terminated if the Contractor is unable to take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction.

SUBCLAUSE 10.1 - PERFORMANCE SECURITY

Replace the text of Sub-clause 10.1 with the following:

"The Contractor shall provide security for his proper performance of the Contract within 14 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee as stipulated by the Employer in the Appendix to Bid. The Performance Security shall be issued by a bank incorporated in Kenya. The Contractor shall notify the Engineer when providing the Performance Security to the Employer.

"Without limitation to the provisions of the preceding paragraph, whenever the Employer determines an addition to the Contract Price as a result of a change in cost, the Contractor, at the Engineers written request, shall promptly increase the value of the Performance Security by an equal percentage.

SUBCLAUSE 10.2 - VALIDITY OF PERFORMANCE SECURITY

The Performance Security shall be valid until a date 28 days after the date of issue of the Defects Liability Certificate. The security shall be returned to the Contractor within 14 days of expiration.

Add

The Resident Engineer shall provide a 28days Notice to the Contractor informing him of the early expiry of his Performance Security. Upon receipt of such a Notice the Contractor shall before lapse of 14days extend the Performance security and provide evidence of such an extension to the Resident Engineer. Failure by the contractor to renew his performance Security 7days to its expiry the resident Engineer will Request the Engineer to redeem it. Such a request shall be handled immediately and the performance security recovered.

SUB CLAUSE 10. 3 - CLAIMS UNDER PERFORMANCE SECURITY

Delete the entire sub-clause 10.3.

The Employer shall be at liberty to claim part or the entire performance Security without informing or notifying the Contractor provided that the conditions necessitating the claim are contractual.

ADD NEW SUBCLAUSE;

'SUBCLAUSE 10. 4 - COST OF PERFORMANCE SECURITY

The cost of complying with the requirements of this clause shall be borne by the Contractor.'

SUB CLAUSE 11. 1 - INSPECTION OF SITE

In line 17 after "affect his Tender" add

"and the Contractor shall be deemed to have based his BID on all the aforementioned"

Delete the last paragraph completely and replace with the following:

"The Employer in no way guarantees completeness nor accuracy of the soil, materials, subsurface and hydrological information made available to the Contractor at the time of bidding or at any other time during the period of the Contract, and the Contractor shall be responsible for ascertaining for himself all information as aforesaid for the execution of works and his BID shall be deemed to have been priced accordingly.

ADD A NEW SUBCLAUSE;

'SUBCLAUSE 11.2 - ACCESS TO DATA

Data made available by the Employer in accordance with Clause 11.1 shall be deemed to include data listed elsewhere in the Contract as open for inspection at the address stipulated in the Appendix to Bid.'

SUBCLAUSE 14.1 PROGRAM TO BE SUBMITTED

The time within which the program shall be submitted shall be as specified in the Appendix to the Form of Bid.

This detailed program shall be based upon the program submitted by the Contractor as part of his BID, where this was required, and shall in no material manner deviate from the said program.

The program shall be in the form of a Critical Path Method Network (CPM Network) showing the order of procedure and a description of the construction methods and arrangements by which the Contractor proposes to

carry out the works. It should also be supplemented by a time –bar chart of the same program. The program shall be coordinated with climatic, groundwater and other conditions to provide for completion of the works in the order and by the time specified. The program shall be revised at three-month intervals and should include a chart of the principle quantities of work forecast for execution monthly.

The Contractor shall submit to the Engineer not later than the day or date mentioned in the Appendix to the Form of Bid, a general description of his proposed arrangements and methods for the execution of the Works, including temporary offices, buildings, access roads, construction plant and its intended production output, working shift arrangements, labour strength, skilled and unskilled, supervision arrangements, power supply arrangements, supply of materials including a materials utilization program, stone crushing, aggregate production and storage, cement handling, concrete mixing and handling, methods of excavation, dealing with water, testing methods and facilities.

During the execution of the works, the Contractor shall submit to the Engineer full and detailed particulars of any proposed amendments to the arrangements and methods submitted in accordance with the foregoing.

If details of the Contractors proposals for Temporary Works are required by the Engineer for his own information the Contractor shall submit such details within fourteen days of being requested to do so.

The Resident Engineer may at his discretion provide to the Contractor a Format of submitting the Program of Works to comply with the Cash flow projections and budgets assigned to the project

The various operations pertaining to the works shall be carried out in such a progressive sequence as will achieve a continuous and consecutive output of fully completed roadworks inclusive of all bridge works and culverts within the time limits specified in the Contract. Generally, the Contractor shall start at one end of the road and progress continuously towards the other without leaving any isolated section or sections of uncompleted road provided always that the site of the works has been acquired in its entirety and the encumbrances and services thereon removed.

The Contractor shall allow in his programme all published Kenya public holidays including but not limited to the following per calendar year during which the Contractor shall not be permitted to work.

- New Year's Day (1st January)
- Good Friday
- Easter Monday
- Labour day (1st May)
- Madaraka Day (1st June)
- IddUlFitr
- Utamaduni Day (10th October)
- Mashujaa Day (20th October)
- Jamhuri day (12th December)
- Christmas Day (25th December)
- Utamaduni day (26th December)

The Contractor shall also allow per calendar year for a further 2 unspecified public holidays which may be announced by the Government of Kenya with no prior notification upon which he shall not be permitted to work.

SUBCLAUSE 14.2- REVISED PROGRAMME

Add at the end of the first paragraph;

'Failure by the Contractor to submit the Revised Work Program in the prescribed format and within the stipulated period shall be considered a violation of his contractual obligations and a Notice for Termination shall be issued

to the Contractor.'

SUBCLAUSE 14.3- CASHFLOW ESTIMATE

The time within which the detailed cash flow estimate shall be submitted shall be as specified in the Appendix to the Form of Bid.

SUBCLAUSE 15.1- CONTRACTOR'S SUPERINTENDENCE

Add the following at the end of the first paragraph of sub-clause 15.1:

"The Contractor shall, within Fourteen (14) days of receipt of the Engineer's order to commence the works inform the Engineer in writing the name of the Contractor's Representative and the anticipated date of his arrival on site. The Contractor shall also submit a specimen signature of his proposed Site Agent /Road Manager who **SHALL** be the only signatory to payment of certificates/Monthly statements from the Contractor."

Add the following Sub-clause 15.2

'SUBCLAUSE 15.2- LANGUAGE ABILITY AND QUALIFICATIONS OF CONTRACTOR'S AUTHORISED AGENT

Unless otherwise stated in the tender document, the Contractor's Agent or Representative on the site shall have a minimum qualification of a Registered Professional Engineer (Highways), BSc in Civil Engineering, have a Current / Valid Registration by EBK or KETRB, have a PBC Certificate from KIHBIT or other recognised institution and shall be able to read and write English fluently.

The Contractor's Agent or Representative shall have at least 5 years relevant experience as a Road Manager.

SUBCLAUSE 16.2- ENGINEER AT LIBERTY TO OBJECT

At the end of this Clause add

"by a competent substitute approved by the Engineer and at the Contractors own expense."

Add the following Sub-Clauses 16.3 and 16.4:

ADD THE FOLLOWING SUB-CLAUSE

'SUBCLAUSE 16.3- QUALIFICATION AND LANGUAGE ABILITY OF SUPERINTENDING STAFF

Unless otherwise stated in the Tender document, the Contractor's superintending staff shall meet the following minimum qualifications:

Should have a working knowledge of English or Kiswahili. Should any of the superintending staff not be able to meet this condition, the Contractor shall propose to the Engineer arrangements for provision of a sufficient number of interpreters of approved qualifications. The Engineer, at his discretion, may amend, approve or reject such arrangements or reject deployment of superintending staff not meeting the language requirements. The Engineer may at any time during the duration of the Contract amend any approved arrangements made for interpreters, which shall be implemented at the Contractors expense.

The key staff listed below must have academic qualifications from government-recognised institutions or equivalent institutions of the levels set out in Section 5, Part 6.

- Site Agent /Road Manager

Qualifications as above shall be subject to verification and approval on site by the Engineer or his representative on site before commencement of the said works.'

SUBCLAUSE 16.4 – EMPLOYMENT OF LOCAL PERSONNEL

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience who are Kenya citizens.

SUBCLAUSE 19.1- SAFETY, SECURITY AND PROTECTION OF THE ENVIRONMENT

Add Sub-Clause-paragraph (d) of Sub-Clause 19 as follows:

Notwithstanding the Contractor's obligation under Sub-Clause-paragraph (a), (b) and 9(c) of Sub-Clause 19.1 of the Conditions of Contract, the Contractor shall observe the following measures with a view to reducing or elimination adverse environmental effects by the site works:

(i) All quarries and borrow pits shall be filled and landscaped to their original state after extraction of construction material
(ii) Soil erosion due to surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures that shall include, but are not limited to grassing and planting if trees
(iii) Long traffic diversion roads shall be avoided so as to minimize the effect of dust on the surrounding environment. In any case all diversions shall be kept damp and dust free
(iv) Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed of in such a way as not to adversely affect the environment
(v) Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Government so as to minimize noise pollution and community interference.

Add Paragraph (e) of Sub-Clause 19.1 as follows:

e). Notwithstanding the Contractor's obligation under Sub-Clause-paragraph (a), (b) and (c) of Sub-Clause 19.1 of the Conditions of Contract, the Contractor shall observe the following measures with a view to enhance Road Safety to the Road Users and Site Workers:

vi. Prepare and submit a comprehensive Road Safety Implementation Plan within 14 days after receipt of Order to commence for the Engineer's Approval. The plan shall include but not limited to the following:

- Night driving
- Safety of workers
- Diversions
- Traffic management Plan
- Towing of stalled vehicle

vii. The Contractor should identify, evaluate and monitor potential traffic and road safety risks to workers and road users throughout the Contract life cycle and develop measures and plans to address them.

viii. The Contractor shall install and maintain standard approved traffic warning signs, directional signs, secure the working areas and deploy flagmen at active construction sites.

ix. The Contractor shall assess each phase of the works, monitor incidents and accidents indicating the mitigation measures undertaken and prepare monthly reports to be submitted to the Resident Engineer.

x. The Contractor shall factor the cost of implementation of the Road Safety Plan in the rates for the Works.

Failure by the Contractor to observe the above safety features shall be deemed to be a violation of the Contractor's Obligations and shall be grounds for Suspension and/or Termination.

SUBCLAUSE 20.4 - EMPLOYERS RISKS

Delete Sub-Clause (h) and substitute with;

(h) any operation of the forces of nature (insofar as it occurs on site) which an experienced contractor:

(i) could not have reasonably foreseen, or

(ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:

(A) prevent loss or damage to physical property from occurring by taking appropriate measures or

(B) insure against such loss or damage

SUBCLAUSE 21.1 - INSURANCE OF WORKS AND CONTRACTOR 'S EQUIPMENT

Delete the first sentence of this Clause and replace with the following:

"prior to commencement of the Works the Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure to the satisfaction of the Employer:"

Add the following words at the end of Sub-paragraph (a) and immediately before the last word of Sub- paragraph (b) of Sub-Clause 21.1:

"It being understood that such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred"

SUBCLAUSE 21.2 – SCOPE OF COVER

Amend sub-paragraph (a) of Sub-Clause 21.2 as follows:

Delete words "from the start of work at the site" and substitute the words "from the first working day after the Commencement Date"

Add the following as Sub-Clause (c) under Sub-Clause-Clause 21.2

(c) It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.

Add

The Contractor shall be expected to insure all road assets from damage and to pursue the insurance companies as and when damages to these assets occur. In addition, the Contractor is expected to furnish the Engineer with a copy of Insurance Policy of WIBA at the commencement of works.

SUBCLAUSE 21.4 - EXCLUSIONS

Amend Sub-Clause 21.4 to read as follows:

"There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 sub-paragraph (a) (i) to(iv) of the Conditions of Particular Application."

SUBCLAUSE 23.2 – MINIMUM AMOUNT OF INSURANCE

Add the following at the end of this Clause:

".. with no limits to the number of occurrences".

SUBCLAUSE 25.1 – EVIDENCE AND TERMS

Amend Sub-Claus OF INSURANCE 25.1 as follows:

Insert the words "as soon as practicable after the respective insurances have been taken out but, in any case," before the words "prior to the start of work at the site"

Add the following Sub-Clauses 25.5, 25.6

SUBCLAUSE 25.5 – INSURANCE NOTICES

Each policy of insurance effected by the Contractor for purposes of the Contract shall include a provision to the effect that the Insurer shall have a duty to give notice in writing to the Contractor and Employer of the date when a premium becomes payable. This shall not be more than thirty (30) days before that date and the policy shall remain in force until thirty (30) days after the giving of such notice.

SUBCLAUSE 25.6 – NOTIFICATION TO INSURERS

It shall be the responsibility of the Contractor to notify insurers under any of the insurance referred to in the preceding clauses 21, 23 and 24 on any matter or event, which by the terms of such insurance are required to be so notified. The Contractor shall indemnify and keep indemnified the Employer against all losses, claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in consequence of any default by the Contractor in complying with the requirements of this Sub-Clause whether as a result of avoidance of such insurance or otherwise.

SUBCLAUSE 28.2 – ROYALTIES

Add at the end of this Sub-Clause the following sentence:

"The Contractor shall also be liable for all payments or compensation if any that are levied in connection with the dumping of part or all of any such material."

Add

The Contractor shall be solely responsible for any Cess and any other fees that the County/Region May levy on materials, goods or transportation within the Region

SUBCLAUSE 29.1 – INTERFERENCE WITH TRAFFIC

Supplement Sub-Clause 29.1 by adding the following sentence at the end:

"The Contractor will be permitted to use existing public roads for access to the site. The Contractor shall pay

vehicle license tax and road maintenance duty in accordance with relevant regulations and shall obtain any necessary permits or licenses from relevant authorities for transporting his equipment."

Add the following subclause 29.2:

SUBCLAUSE 29.2 – REINSTATEMENT AND COMPENSATION FOR DAMAGES TO PERSONS AND PROPERTY

The Contractor shall reinstate all properties whether public or private which are damaged in consequence of the construction and, maintenance of the works to a condition as specified and at least equal to that prevailing before his first entry on them.

If in the opinion of the Engineer the Contractor shall have failed to take reasonable and prompt action to discharge his obligations in the matter of reinstatement, the Engineer will inform the Contractor in writing of his opinion, in which circumstances the Employer reserves the right to employ others to do the necessary work of reinstatement and to deduct the cost thereof from any money due or which shall become due to the Contractor.

The Contractor shall refer to the Employer without delay all claims which may be considered to fall within the provisions of Clause 22.1.

Add the following Sub-Clause 34.2 to 34.8

SUBCLAUSE 34.2 – CONDITIONS OF EMPLOYMENT OF LABOUR

The Contractor shall be responsible for making all arrangements for and shall bear all costs relating to recruitment, obtaining of all necessary visas, permits or other official permission for movements of staff and labour.

SUBCLAUSE 34.3 – FAIR WAGES

The Contractor shall, in respect of all persons employed anywhere by him in the execution of the Contract, and further in respect of all persons employed by him otherwise than in the execution of the Contract in every factory, Workshop or place occupied or used by him for the execution of the Contract, observe and fulfil the following conditions:

(a) The Contractor shall pay rates of wages, observe hours of labour and provide conditions of labour, housing, amenities and facilities not less favourable than those required by the latest Regulation of Wages (Building and Construction Industry) Order as of the time of bid submission, and subsequent amendments thereto, or in any wage scales, hours of work or conditions agreed by the Ministry of Labour or other Government Department in consultation with the appropriate wage fixing authority and generally recognized by other employees in the district whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

(b) In the absence of any rates of wages, hours or conditions of labour so established the Contractor shall pay rates of wages and observe hours and conditions of labour which are not less favourable than the general level of wages, hours and conditions observed by other Employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

(c) Where the absence of established rates of wages, hours and conditions of labour or the dissimilarity of the general circumstances in the trade of industry in which the Contractor is engaged prevent the Contractor from observing rates of wages, hours and conditions of labour ascertained under sub-paragraph (a) and (b) above the Contractor in fixing the rates of wages, hours and conditions of labour of his employees shall be guided by the advice of the Labour Department.

(d) The Contractor shall recognize the freedom of his employees to be members of trade unions.

(e) The Contractor shall maintain records in English of the time worked by, and the wages paid to, his employees. The Contractor shall furnish to the Engineer or Employer, if called upon to do so, such particulars of the rates, wages and conditions of labour as the Employer or Engineer may direct.

(f) The Contractor shall at all times during the continuance of the contract display, for the information of his employees in every factory, workshop or place occupied or used by him for the execution of the Contract, a copy of this clause together with a notice setting out the general rates of wages, hours and conditions of labour of his employees.

(g) The Contractor shall be responsible for the observance of this clause by sub-Contractors employed in the execution of the works.

SUBCLAUSE 34.4 – BREACH OF FAIR WAGES CLAUSE

Any Contractor or Sub-Contractor who is found to be in breach of Fair Wages Clause shall cease to be approved as a Contractor or Sub-Contractor for such period as the Permanent Secretary for the Ministry of Transport and Infrastructure may determine.

Should a claim be made to the Employer alleging the Contractor's default in payment of Fair Wages of any workman employed on the Contract and if proof thereof satisfactory to the Employer is furnished by the Labour Authority, the Employer may, failing payment by the Contractor, pay the claims out of any monies due or which may become due to the Contractor under the Contract.

SUBCLAUSE 34.5 – RECRUITMENT OF UNSKILLED LABOUR

Any additional unskilled labour which is required by the Contractor for the works and which is not in his employ at the time of the acceptance of the BID shall be recruited by the Contractor from the Labour Exchange or Exchange or Exchanges nearest to the site or sites of the work.

SUBCLAUSE 34.6 – COMPENSATION FOR INJURY

The Contractor shall in accordance with the Workmen's Compensation Act of the Laws of Kenya and any other regulations in force from time to time pay compensation for loss or damage suffered in consequence of any accident or injury or disease resulting from his work to any workman or other person in the employment of the Contractor or any Subcontractor.

SUBCLAUSE 34.7 – LABOUR STANDARDS

(a) the Contractor shall comply with the existing local labour laws, regulations and labour standards

(b) the Contractor shall formulate and enforce an adequate safety program with respect to all work under his contract, whether performed by the Contractor or subcontractor. The Contractor has assurance from the Employer of cooperation where the implementation of these safety measures requires joint cooperation.

(c) Upon written request of the Employer the Contractor shall remove or replace any of his employees employed under this Contract.

Add the following Sub-Clause 35.2 and 35.3.

SUBCLAUSE 35.2 – RECORDS OF SAFETY AND HEALTH

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

SUBCLAUSE 35.3 – REPORTING OF ACCIDENTS

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means. The Contractor shall also notify the relevant authority whenever the Laws of Kenya require such a report.

SUBCLAUSE 36.1 – MATERIALS, PLANT AND WORKMANSHIP

Add at the end of Sub-Clause 36.1 the following:

Failure by the Contractor to observe and control quality of the works shall be deemed to be a violation of the Contractor's Obligations and shall be grounds for Suspension of works and/or Termination of Contract.

The Contractor shall submit to the Engineer, Project Specific Quality Management Plan for approval 14 days after issuance of order to commence. The Plan shall include but not limited to:

1. Key staff that will be involved in the project and their role in quality management
2. Resources (Human and machinery) and Resource allocation in quality management
3. Processes and procedures to be followed in quality management
4. Controls to be put in place to ensure that the quality management plan is adhered to.
5. Reporting methodology on quality Management
6. Methodology on inspection, testing, monitoring and measuring to ensure conformity to quality requirement in accordance with the contract.
7. Description on correction action to be undertaken on non-conforming outputs and corrective action to avoid recurrence.

SUBCLAUSE 41.1 – COMMENCEMENT OF WORKS

Amend Sub-Clause 41.1 as follows:

Delete the words "as soon as is reasonably possible" in the first sentence and replace with "within the period stated in the Appendix to Bid".

SUBCLAUSE 43.1 – TIME FOR COMPLETION

Amend Sub-Clause 43.1 as follows:

Delete the words “within the time” to “such extended time” and substitute “by the date or dates stated or implied in Clause 14 of these Conditions of Particular Application.

SUBCLAUSE 44.1 – EXTENSION OF TIME FOR COMPLETION

Add at the end of Sub-Clause 44.1 the following:

“Neither rains falling within the rainy seasons as occurs in Kenya nor floods caused by such rains shall be deemed exceptional weather conditions such as may fairly entitle the Contractor to an extension of time for the completion of the work.”

SUBCLAUSE 45.1 – RESTRICTION ON WORKING HOURS

Add at the end of Sub-Clause 45.1 the following:

“If the Contractor requests permission to work by night as well as by day, then if the Engineer shall grant such permission the Contractor shall not be entitled to any additional payments for so doing. All such work at night shall be carried out without unreasonable noise or other disturbance and the Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out night work and from and against all claims, demands, proceedings, costs, charges and expenses whatsoever in regard or in relation to such liability.

“In addition, the Contractor will be required to provide, for any work carried out at night or recognized days of rest, adequate lighting and other facilities so that the work is carried out safely and properly.

“In the event of the Engineer granting permission to the Contractor to work double or rotary shifts or on Sundays, the Contractor shall be required to meet any additional costs to the Employer in the administration and supervision of the Contract arising from the granting of this permission.”

SUBCLAUSE 47.1(B) – PENALTY FOR NOT ATTENDING TO POTHOLES

“If the Contractor trims/excavates any single pothole for repair and fails to seal it with AC within a period of 48 hours from the time of the excavation, penalty shall be charged to the contractor in the next due certificate at a rate specified in the Appendix to form of bid per pothole.

SUBCLAUSE 47.2 – REDUCTION OF LIQUIDATED DAMAGES

Add the following paragraphs at the end of this Sub-Clause:

“There shall be no reduction in the amount of liquidated damages in the event that a part or a section of the Works within the Contract is certified as completed before the whole of the Works comprising that Contract.

The Employer shall pay no bonus for early completion of the Works to the Contractor.

The sum stated in the Appendix to Bid as liquidated damages shall be increased by a sum equivalent to any

additional amount payable by the Employer to the Contractor under clause 70.1 in respect of an increase in costs in such a period that would not have been incurred by the Contractor if the works had been completed by the due date for completion prescribed by Clause 43."

Add

The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the Contractor, and after the limit of deduction prescribed in the Appendix to tender is reached, the Contract shall be considered due for Termination.

SUBCLAUSE 48.3 – SUBSTANTIAL COMPLETION OF PARTS

In Hybrid PBC Works Contracts, when Instructed works are substantially completed, the same works shall be taken over and shall be considered complete.

SUBCLAUSE 49.1 – DEFECTS LIABILITY PERIOD

Defects liability period shall start for Instructed works immediately the works are certified as Complete by the Engineer. The period of Defects liability shall be prescribed in the Appendix to the Contract.

SUBCLAUSE 49.2 – COMPLETION OF OUTSTANDING WORK AND REMEDYING DEFECTS

Add

At the time of End of Defects Liability Inspection, no defect arising from the permanent works existing shall be acceptable for taking over. The Inspection team shall verify and satisfy themselves that all the outstanding works and defects arising out of the works have been attended to sufficiently. Routine Maintenance works/PBC Works shall also be inspected at the time of End of Defects Liability Inspection and should comply to the specifications of the PBC Works.

SUBCLAUSE 51.1 – VARIATIONS

Add the following at the end of the last paragraph

No such variations in any way shall contravene the requirements of Public Procurement and Disposal Act of 2015 and the amendments thereof.

SUBCLAUSE 52.1 – VALUATION AND VARIATIONS

Add new Clause 52.2(c)

No change in the unit rates or prices quoted shall be considered for items included in the schedule of Dayworks rates, or Provisional Sums and items, or for any item in the BOQ.

Add new clause 52.3

SUBCLAUSE 52.3 – VARIATIONS EXCEEDING 25 PERCENT

Subject to requirements of Public Procurement and Disposal Act of 2015 and the amendments thereof, variations above 25 percent critical to the proper function of the completed works and without which part or whole of already specified work in the bill of quantities cannot be adequately executed may constitute ground for Contract termination by either parties.

In which case, the Engineer shall give 28-day notice to the Contractor with a copy to the Employer of such occurrence. The Contract shall terminate at the expiry of the notice.

SUBCLAUSE 52.4 – DAYWORKS

Add the following at the end of Sub-Clause 52.4:

The work so ordered shall immediately become part of the works under the contract. The Contractor shall, as soon as practicable after receiving the Dayworks order from the Engineer undertake the necessary steps for due execution such work. Prior to commencement of any work to be done on a Dayworks basis, the Contractor shall give an advance notice to the Engineer stating the exact time of such commencement.

SUBCLAUSE 54.1 – CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS
: Exclusive use for the works

Amend Sub-Clause 54.1 as follows:

Line 5: add "written" between "the" and "consent".

Delete Sub-Clauses 54.2 and 54.5.

Add

The Contractor shall be at liberty to deliver and withdraw equipment as and when needed for the undertaking of works under this contract according to the equipment deployment schedule and work program approved. If a particular equipment is required and the contractor is unable at the required time to avail the said equipment, the contractor shall be expected to notify the Engineer of the possible reasons and adjustments made to such delays. No Provisions shall be made for any claims on Idle Equipment.

SUBCLAUSE 55.2 – OMMISIONS OF QUANTITIES

Items of Works described in the Bills of Quantities for which no rate or price has been entered in the Contract shall be considered as included in other rates and prices in the Contract and will not be paid for separately by the Employer.

Add the following Sub-Clause 58.4:

SUBCLAUSE 58.4 – PROVISIONAL ITEMS

Provisional items shall be read as Provisional Sums and shall be operated as such in accordance with Sub- Clauses 58.1 to 58.3.

Clause 60 of the General Conditions is deleted and substituted with the following: -

SUBCLAUSE 60.1 – MONTHLY STATEMENT

The Contractor shall submit a statement to the Engineer at the end of each month, in a tabulated form approved by the Engineer, showing the amounts to which, the Contractor considers himself to be entitled. The statement shall include the following items, as applicable;

- the value of the Permanent Work executed up to the end of previous month

- such an amount (not exceeding 75 percent of the value) as the Engineer may consider proper on account of materials for permanent work delivered by the Contractor in the site

- such amount as the Engineer may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bill of Quantities

- adjustments under Clause 70

- any amount to be withheld under retention provisions of Sub-clause 60.3

- any other sum to which the Contractor may be entitled under the Contract

If the Engineer disagrees with or cannot verify any part of the statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes and corrections in the statement as may be directed by the Engineer. In cases where there is difference in opinion as to the value of any item, the Engineer's view shall prevail.

SUBCLAUSE 60.2 INTERIM PAYMENT CERTIFICATE

The Contractor shall forward to the Engineer an Interim Payment Certificate based on the statement as corrected above and, should it be necessary in the Engineers opinion, shall promptly make any further amendments and corrections to the Interim Payment Certificate.

The Engineer shall not unreasonably withhold certifying an Interim Payment Certificate and in case of likely delay in establishing the value of an item, such item may be set aside and the remainder certified for payment.

Within 45 days after receipt of the Interim Payment Certificate and subject to the Contractor having made such further amendments and corrections as the Engineer may require, the Engineer will forward to the Employer the certified Interim Payment Certificate.

Provided that the Engineer shall not be bound to certify any payment under this Clause if the net amount thereof, after all retentions and deductions, would be less than the minimum amount of Interim Payment Certificate's stated in the Appendix to Form of Bid. However, in such a case, the uncertified amount will be added to the next interim payment, and the cumulative unpaid certified amount will be compared to the minimum amount of interim payment.

SUBCLAUSE 60.3 – PAYMENT OF RETENTION MONEY

A retention amounting to the percentage stipulated in the Appendix to Bid shall be made by the Engineer in the first and following Interim Payment Certificates until the amount retained shall reach the "Limit of Retention Money" named in the Appendix to Form of BID.

Upon the issue of the Taking-Over Certificate, with respect to the whole of the works one half of the retention money shall become due and shall be paid to the Contractor when the Engineer shall certify in writing that the last section of the whole works has been substantially completed.

Upon expiration of the Defects Liability Period for the works, the other half of the Retention Money shall be certified by the Engineer for payment to the Contractor.

Provided that in the event of different Defects Liability Periods being applicable to different Sections of the Permanent Works pursuant to Clause 48, the expression "expiration of the Defects Liability Period "Shall, for the purpose of this sub-clause, be deemed to mean the expiration of the latest of such periods.

Provided also that if at such time, there remain to be executed by the Contractor any work instructed, pursuant

to Clause 49 and 50, in respect of the works, the Engineer shall be entitled to withhold certification until completion of any such work or so much of the balance of the Retention money as shall in the opinion of the Engineer, represents the cost of the remaining work to be executed.

SUBCLAUSE 60.4– CORRECTION OF CERTIFICATES

The Engineer may in any Interim Payment Certificate make any correction or modification to any previous Interim Payment Certificate signed by him and shall have authority, if any work is not being carried out to his satisfaction to omit or reduce the value of such work in any Interim Payment Certificate.

SUBCLAUSE 60.5– STATEMENT AT COMPLETION

Not later than 84 days after the issue of the Taking-Over Certificate in respect of the whole of the works, the Contractor shall submit to the Engineer a statement at completion showing in detail, in a form approved by the Engineer;

The final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate.

Any further sums which the Contractor considers to be due; and

An estimate of amounts that the Contractor considers will become due to him under the Contract.

Estimate amounts shall be shown separately in the Statement at Completion. The Contractor shall amend and correct the Statement as directed by the Engineer and submit a Certificate at Completion to be processed as in Sub-Clause 60.2.

SUBCLAUSE 60.6 – FINAL STATEMENT

Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 62.1, the Contractor shall submit to the Engineer for consideration a draft final statement with supporting documents showing in detail, in the form approved by the Engineer;

The final value of all work done in accordance with the Contract; Any further sums which the Contractor

considers to be due to him.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be required.

SUBCLAUSE 60.7– DISCHARGE

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy 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 under the Final Payment Certificate issued pursuant to Sub-Clause 60.8 has been made and the Performance Security referred to in Sub-Clause 10.1 has been returned to the Contractor.

SUBCLAUSE 60.8 – FINAL PAYMENT CERTIFICATE

Upon acceptance of the Final Statement as given in Sub-Clause 60.6, the Engineer shall prepare a Final Payment Certificate which shall be delivered to the Contractor's authorized agent or representative for his signature. The Final Payment Certificate shall state:

The final value of all work done in accordance with the Contract;

After giving credit to the Employer for all amounts previously paid by the Employer, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer.

Final Certificate shall be issued for any sum due to the Contractor even if such is less than the sum named in the Appendix to the Form of BID.

SUBCLAUSE 60.9– CESSATION OF EMPLOYERS LIABILITY

unless the Contractor notifies the Engineer of his objection to the Final Certificate within fourteen days of delivery thereof, he shall be deemed to have agreed that he accepts the total Contract Price as set out in the Final Certificate as full settlement for all Work Done under the Contract including any variations and omissions thereof but excluding any variations and claims previously made in writing.

SUBCLAUSE 60.10 – TIME FOR PAYMENT

The amount due to the Contractor under any Interim Payment Certificate or Final Payment Certificate issued pursuant to this Clause or to any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor as follows:

(i) In the case of Interim Payment Certificate, within the time stated in the Appendix to Form of Bid, after the Engineer has signed the Interim Payment Certificate.

(i) In the case of the Final Payment Certificate pursuant to Subclause 60.8, within the time stated in the Appendix to Form of Bid, after the Engineer has signed the Final Payment Certificate.

(ii) In the event of the failure of the Employer to make payment within the times stated, the Employer shall make payment to the Contractor of simple interest at a rate equal to two percentage points above the average Base Lending Rate of three leading banks namely Kenya Commercial Bank, Standard Chartered Bank and Barclays Bank for the time being or as shall be the case from the time to time obtained from the Central Bank of Kenya. The provisions of this subclause are without prejudice to the Contractor’s entitlements under Clause 69 or otherwise.

SUBCLAUSE 60.11 – CURRENCY OF PAYMENT

The Contract Price shall be designated in Kenyan Currency.

All work performed by the Contractor under the Contract shall be valued in Kenya Shillings using the rates and prices entered in the Bills of Quantities together with such other increases to the Contract Price, except for variation of price payments in accordance with Clause 70.1.

SUBCLAUSE 60.12 – ADVANCE PAYMENT

(d) "At the request of the Contractor, The Employer **MAY** make an interest free advance payment to the contractor for the cost of mobilization in respect of the Works, in a lump sum of any amount not exceeding ten (10) percent of the Contract Price named in the Letter of Acceptance and Letter of Award. Non-Payment or delayed payment of the Advance shall not be a cause for any claim whatsoever. The Contractor is expected to have adequate financial resources to mobilise and execute the works with due diligence without the advance payment being made. Payment of such advance amount will be due under a separate certification by the Engineer after:

ii. Provision by the Contractor of the Performance Security in accordance with Clause 10 of the Conditions of Contract, and

iii. Provision by the Contractor of a Bank Guarantee which shall remain effective until the advance payment has been completely repaid by the Contractor out of current earnings under the Contract and certified accordingly by the Engineer.

(e) A form of Bank guarantee acceptable to the Employer is included in the Tender Documents. The advance payment shall be used by the Contractor exclusively for mobilization expenditures, in connection with the works. The advance payment shall not be subject to retention money.

(f) The advance payment shall be repaid with percentage reductions from the monthly interim payments certified by the Engineer. The reimbursement of the lump sum advance payment shall be made by deductions from the interim payments and where applicable from the balance owing to the contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original contract sum. It shall have been completed by the time 80% of the contract sum is reached.

(g) The amount to be repaid by way of successive deductions shall be calculated by the means of the formula:

RI = A(x-X) / (80%-20%)

Where:

RI = the amount to be reimbursed.

A = the amount of the advance which has been granted.

x = the amount of proposed cumulative payments as a percentage of the original amount of the contract. This figure will exceed 20% but not 80%.

X = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

(h) With each reimbursement the guarantee will be reduced accordingly.

SUBCLAUSE 60.13 MATERIALS FOR PERMANENT WORKS

With respect to materials brought by the Contractor to the site for incorporation into the permanent works, the Contractor shall,

-Receive a credit in the month in which these materials are brought to site,

-Be charged a debit in the month in which these materials are incorporated in the permanent works.

Both such credit and debit to be determined by the Engineer in accordance with the following provisions.

No credit shall be given unless the following conditions shall have been met to the Engineers satisfaction

The materials are in accordance with the specifications for the works;

The materials have been delivered to site and are properly stored and protected against loss, damage or deterioration;

The Contractors record of the requirements, orders receipts and use of materials are kept in a form approved by the Engineer and such records are available for inspection by the Engineer;

The Contractor has submitted a statement of his cost of acquiring and delivering the materials and plant to the Site, together with such documents as may be required for the purpose of evidencing such cost;

The materials are to be used within a reasonable time.

The amount to be credited to the Contractor shall not be more than 75% of the Contractor's reasonable cost of the materials delivered to site, as determined by the Engineer after review of the documents listed in subparagraphs (a) (iv) above;

The amount to be debited to the Contractor for any materials incorporated into the works shall be equivalent to the credit previously granted to the Contractor for such materials pursuant to Clause (b) above as determined by the Engineer.

SUBCLAUSE 63.1

Add

is unable to take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction as stipulated in subclause 8.2 of the conditions of contract.

a) Fails to comply with Subclause 10.1 and 10.2 of the Conditions of Contract

b) Fails to comply with Subclause 14.2 and Subclause 14.3 of the Conditions of Contract and Appendix to Form of Bid.

c) Fails to observe the safety as stipulated in Subclause 19.1 and amendments therein.

d) Fails to Conform to Service levels as detailed in the Appendix to Form of Bid and as required in subclause 13.1.

e) Incurs the maximum amount of Liquidated damages as stated in the Appendix to Form of Bid or the liquidated damages amount, exceeds the performance security then the contract would be automatically Terminated.

f) Has not completed the works despite the lapse of the Contract Period as stated in the Appendix to form of Bid

SUBCLAUSE 67.1 – ENGINEER'S DECISION

Delete the entire sub clause 67.1 and add the following;

"If a dispute of any kind whatsoever arises between the Employer and the Contractor in any connection with, or arising out of, the Contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after repudiation or other termination of the Contract including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state it is made pursuant to this clause. No later than 28 (twenty-eight) day after the day on which he received such reference the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state it is made pursuant to this clause.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided, in an Amicable Settlement, Adjudicator's or Arbitrator's award.

If either the Employer or the Contractor be dissatisfied with the any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the 28th (twenty eighth) after the day on which he received the reference, then either the Employer or the Contractor may, on or before the 28th (twenty eighth) day after the day the day on which he received notice of such decision, or on or before the 28th (twenty eighth) day after the day the day on which the said period of 28 days expired, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence Adjudication, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence Adjudication, as hereinafter provided, as to such dispute; no adjudication in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence adjudication as to such dispute has been given by either the Employer or the Contractor on or before the twenty eighth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor. "

SUBCLAUSE 67.2 – AMICABLE SETTLEMENT

Delete the entire sub clause 67.2 and add the following;

"Where notice to of intention to commence adjudication as to a dispute has been in accordance with sub clause 67.1, the parties shall attempt to settle such dispute in amicably before the commencement of Adjudication; provided that, unless the parties otherwise agree, Adjudication may be commenced on or after the 14th (fourteenth) day after the day on which notice of intention to commence adjudication of such dispute was given, even if an attempt at amicable settlement thereto has been made."

SUBCLAUSE 67.3 – ADJUDICATION

Delete the entire sub clause 67.3 and add the following;

"The Adjudicator shall be appointed by the Chartered Institute of Arbitrators (Kenya) unless the appointment is agreed by the parties within 7 (seven) days of the notice to adjudication.

The adjudication process shall be conducted according to the Laws of Kenya and the Rules of the Chartered Institute of Arbitrators (Kenya)."

SUBClAUSE 67.3 – ARBITRATION

Delete the entire sub clause 67.3 and add the following;

"Any dispute in respect of which:

The decision, if any, of the Adjudicator has not become final and binding pursuant to sub clause 67.1, and

Amicable settlement has not been reached within the period stated in sub clause 67.2,

shall be finally settled, under the Laws of Kenya and the Arbitration Rules of the Chartered Institute of Arbitrators (Kenya Branch) by one or more arbitrators appointed by the Chartered Institute of Arbitrators (Kenya Branch).

Neither party shall be limited in the in the proceedings before such arbitrator/s to the evidence or arguments put before the Adjudicator for the purpose of obtaining his said decision pursuant to sub clause 67.1.

Arbitration may be commenced prior to or after completion of the works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

SUBCLAUSE 68.2 – NOTICES TO EMPLOYER AND ENGINEER

Delete in Sub-Clause 68.2 the words "nominated for that purpose in Part II of these conditions".

a. The Employer's address is: The Chief Officer,

   Department of Roads and Transport, P.O. Box 9 - 70200

   WAJIR

b. The Engineer's address is: Senior Superintending Engineer,

   Department of Roads and Transport, P.O. Box 49712 - 00100

   WAJIR

SUBCLAUSE 68.4 – All letters and notices from the Contractor to the Employer and/Engineer must be signed by the Managing Director or the person given written power of Attorney.

In addition to the usual postal office contacts the tenderer is required to provide official email address to be used to communicate urgent letters requiring timely responses from the tenderer like tender addendum (addenda), award letter or any other deemed urgent from the Employer requiring timely preparation and reply.

CLAUSE 69 – DEFAULT OF EMPLOYER

Delete Sub-Clause 69.1 (c)

In Sub-Clause 69.4 add at the end of first paragraph the following "the period of such suspension shall be as agreed upon by both parties and in any case not more than six (6) months".

In Subclause 69.4 of General Conditions of Contract Part I, insert at the end ----- "The amounts of such costs which shall be added to the Contrct Price shall exclude any cost due to idle time for equipment, plant and labour."

CLAUSE 70 – CHANGES IN COST AND LEGISLATION

SUB-CLAUSE 70.1 – INCREASE OR DECREASE OF COST

Delete Sub-Clause 70.1 of part 1 in its entirety and substitute the following:

"The Contract Price shall be deemed to have been calculated in the manner set below and shall be subject to the adjustment in the event specified hereunder:

The rates contained in the priced Bills of Quantities are based upon the rates of wages and other emoluments and expenses applicable at the site at the date of Bid pricing (as defined in Sub-Clause 70.4 hereinafter);

(a) If the said rates of wages and other emoluments and expenses shall be increased or decreased by Act, Statute, Decree, Regulation and the like after the said Date of Bid Pricing then the net amount of increase or decrease the emoluments and expenses shall, as the case may be, be paid to or allowed by the Contractor;

(b) The rates contained in the priced Bills of Quantities are based upon the rates of the Contractor's compulsory contributions payable at the date of Bid under or by virtue of any Act, Statute, Regulations and the like applicable at the site;

(c) If any of the said rates of contribution shall be increased or decreased by any Act, Statute, Decree, Regulation and the like after the said Date of Bid Pricing, or if any new statutory contribution becomes payable after that date then the net amount of increase or decrease of the emoluments and expenses shall, as the case may be, be paid to or allowed by the Contractor. The difference between what the Contractor actually pays in respect of work people engaged upon or in connection with the works and what he would have paid in respect of such person had any of the said rates not been increased or decreased or had a new contribution not become payable as aforesaid, shall as the case may be, be paid to or allowed by the Contractor. The formulae for this price adjustment shall be of the following type;

$$pn = A + b\frac{Bn}{Bo} + c\frac{Cn}{Co} + d\frac{Dn}{Do} + e\frac{En}{Eo} + f\frac{Fn}{Fo}$$

where:

Pn Price adjustment factor

A Fixed constant specified in the appendix to Bid
b Weighting for Labour
c Weighting for Fuel and lubricants
d Weighting for Plant and spares
e Weighting for cement
f Weighting for Bitumen products

Bo base cost index for Labour
Co Base cost index for fuel and lubricants
D Base cost index for plant and spares
o
Eo Base cost for cement
Fo Base cost for Bitumen products
Bn Current cost index for Labour
Cn Current cost index for fuel and lubricants
Dn Current cost index for plant and spares
En Current cost index for cement
Fn Current cost for Bitumen products

(d) The rates contained in the priced Bills of Quantities are based upon the market prices of the materials and goods specified in the Schedule of Basic Materials (Schedule G) attached hereto and current at the Date of Bid Pricing (hereinafter referred to as "the basic prices" and the Contractor shall state in the said schedule the basic prices of such materials and goods.

(e) If the market price of any materials or goods specified as aforesaid shall be increased or decreased after the said Date of Bid Pricing, then the net amount of difference between the basic price and the market price payable by the Contractor and current when any such goods and materials are bought shall, as the case may be, be paid to or allowed by the Contractor. Orders for materials and goods listed as aforesaid shall have been placed within a reasonable time after the date at which sufficient information is available for the placing of such orders, and the placing of orders at that time shall be a condition precedent to any payments being made to the Contractor in respect of increased market prices."

SUB-CLAUSE 70.2: SUBSEQUENT LEGISLATION

Add the following to subclause 70.2:

"Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid for or credited as aforesaid if the same shall already have been taken into account in accordance with the other provisions of Clause 70.

Add the following sub clause:-

SUB-CLAUSE 70.3: SUB-CONTRACT

(a) If the Contractor shall decide subject to Clause 4 thereof to sub-let any portion of the work he shall incorporate in the sub-contract provisions to the like effect as those contained in sub-clause (1) of this Clause;

(a) If the price payable under a sub-contract as aforesaid is increased above or decreased below the price in such sub-contract by reason of the operation of the incorporated provisions of sub- clause (1) of this clause then the net amount of such increase or decrease shall as the case may be, be paid to or allowed by the Contractor under this contract.

SUB-CLAUSE 70.4: NOMINATED SUB-CONTRACTORS

This clause shall not apply in respect of work executed by any nominated sub-Contractor (fluctuation in relation to nominated sub-Contractors shall be dealt with under provisions in relation thereto which may be included in the appropriate sub-contract or contract of sale).

SUB-CLAUSE 70.5: DATE OF BID PRICING

The expression "the date of Bid pricing" as used in this Clause means the date 30 days prior to the final date for submission of Bids as determined by the Employer in the Bid documents.

SUB-CLAUSE 70.6: PRIME COST

For imported materials, the supplier's/ manufacturer's Prime costs shall be C.I.F. cost at point of entry by the same means of transport as determined by the Contractor's Basic Rate.

For locally produced materials, the supplier's or manufacturer's prime costs shall be at their nearest depot or the nearest railway station relevant to the works.

For materials which are subject to Government Price Control, payments for price variations will be determined from the difference between the control price in force at a date 30 days prior to the final date for submission of Bids and the price in force on the date of purchase.

SUB-CLAUSE 70.7: MATERIALS TO WHICH VARIATION CLAUSE APPLIES

The materials to which this Variation Clause applies are as outlined in Schedule G of this Bid Document

SUB-CLAUSE 70.8: CHANGE OF SUPPLIER

The Contractor shall not change the supplier or manufacturer during the Contract without the approval of the Engineer.

SUB-CLAUSE 70.9: CONTRACTORS HEAD OFFICE EXPENSES

No payments will be made for price variation related to expenses incurred by the Contractor in his Head Office in Kenya, or overseas.

SUB-CLAUSE 70.10: CURRENCY OF PAYMENTS UNDRER CLAUSE 70

All payments made pursuant to Clause 70 shall be in Kenya Shillings.

SUB-CLAUSE 70.11 – COST OF PREPARING VARIATION OF PRICE CLAIMS

No payments will be made for the cost of preparing V.O.P. claims.

CLAUSE 73 – BRIBERY AND COLLUSION

Add new Clause 73.1:

"The Contractor shall not:

(a) Offer or give or agree to give to any person in the service of the Government of Kenya any gift or consideration or any kind as an inducement or reward for doing or forbearing to do or for having done or forborne

to do any act in relation to the obtaining or execution of this or any other contract to which the Government of Kenya is a party or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract for the Government of Kenya.

(b) Enter into this or any other contract with the Government of Kenya in connection with which commission has been paid or agreed to be paid by or on his behalf or to his knowledge, unless before the contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

Any breach of this condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) or the commission of any offence by the Contractor or by anyone employed by him or acting on his behalf in relation to this or any other contract to which the Government of Kenya is a party shall entitle the Employer to determine the Contract (See Condition 63 hereof) and/ or to recover from the Contractor the amount or value of any such gift, consideration or commission.

Any dispute or difference of opinion arising in respect of either the interpretation, effect or application of this condition or of the amount recoverable hereunder by the Employer from the Contractor shall be decided by the Employer, whose decision shall be final and conclusive.

CLAUSE 72 – RATES OF EXCHANGE COST

Delete clause 72 in its entirety and substitute the following:

The currency of BID and payment is Kenya Shillings and rates of exchange requirements are not applicable.

CLAUSE 74 – CONTRACT CONFIDENTIAL

Add new Clause 74.1:

The Contractor shall treat the details of this Contract as Private and Confidential and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere (save in so far as may be necessary for the purpose thereof) without the previous consent in writing of the Government. If any dispute arises as to the necessity of any publication or disclosures for the purposes of this Contract the same shall be referred to the decision of the Engineer mentioned in the said Conditions of Contract whose award shall be final.

SECTION X - STANDARD CONTRACT FORMS

FORM NO. 1: NOTIFICATION OF INTENTION TO AWARD

[*This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender.*]
[*Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form*]

FORMAT

For the attention of Tenderer's Authorized Representative

Name: …….. *[insert Authorized Representative's name]* Address: *[insert Authorized Representative's Address]* Telephones: *[insert Authorized Representative's telephone/fax numbers]* Email Address: *[insert Authorized Representative's email address]*

*[**IMPORTANT:** insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]*

Date of Transmission:

This Notification is sent by: [*email*] on [*date*] (local time)

Procuring Entity: *[insert the name of the Procuring entity]*

Contract title: *[insert the name of the contract]*

Country: Kenya, County_____(*if the Procuring Entity is from a County*)

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

a) Request a debriefing in relation the evaluation of your Tender, and/or

b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

1. **The successful Tenderer**

Name: [*insert name of successful Tenderer*] Address: [*insert address of the successful Tenderer*]

Contract price: [*insert contract price of the successful Tender*]

2. **Other Tenderers**: *insert names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.]*

	Name of Tenderer	**Tender price**	**Evaluated Tender price**	**Comments (if any)**
1				
2				
3				
4				
5				
6				
7				
Etc.				

1. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (local time).

You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award. Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

Attention: [*insert full name of person, if applicable*] **Title/position**: *[insert title/position*] **Procuring Entity**: [*insert name of Procuring Entity*] **Email address**: [*insert email address*]

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end. The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

2. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement- related Complaint as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

Procuring Entity: [*insert name of Procuring Entity*]

Email address: [*insert email address*]

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

In summary, there are four essential requirements:

a) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.

b) The complaint can only challenge the decision to award the contract.

c) You must submit the complaint within the period stated above.

d) You must include, in your complaint, all of the information necessary to support your case.

e) The application must be accompanied by the fees set out in the Procurement Regulations, which shall not be refundable (information available from the Public Procurement Authority at

www.ppoa.go.ke.

3. **Standstill Period**
   a) **DEADLINE:** The Standstill Period is due to end at midnight on [*insert date*] (local time).
      i) The Standstill Period lasts fourteen (14) Days after the date of transmission of this Notification of Intention to Award.
      ii) The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the

Procuring Entity: _____

Name_____

Title and Position_____

Signature_____

Date_____

FORM NO. 2: LETTER OF NOTIFICATION OF AWARD

Letter of Acceptance

[letter head paper of the Procuring Entity]

[date]

FORMAT

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the **SCC**]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section X, Contract Forms, of the tender document.

We attach a copy of the Contact for your

Authorized Signature:

Name and Title of

Signatory: Name of

Agency:

Attachment: Contract Agreement

FORM NO. 3: FORM OF AGREEMENT
FORM OF AGREEMENT

THIS AGREEMENT made the _____ day of , , between _____of _____ (hereinafter "the Procuring Entity"), of the one part, and_____of_____(herein after "the Contractor"), of the other part:

WHEREAS the Procuring Entity desires that the Works known as_____should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein, The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

   a) The Letter of Acceptance
   b) The Letter of Tender
   c) The addenda Nos_____(if any)
   d) The Particular Conditions
   e) The General Conditions;
   f) The Specification
   g) The Drawings*;* and
   h) The completed Schedules and any other documents forming part of the contract.

3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya on the day, month and year specified above.

Signed by_____

_____(for the Procuring Entity)

Signed by_____

_____(for the Contractor)

FORM NO. 4 - PERFORMANCE SECURITY
– (Unconditional Demand Bank Guarantee)

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of* Procuring

Entity*]* **Date:** _____ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (herein after called "the Applicant") has entered into Contract No. ____ *dated* _____ with the Beneficiary, for the execution of _____ (herein after called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

3. At the request of the Applicant, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of ( ),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

4. This guarantee shall expire, no later than the …..... Day of .....2…[2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

_____

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the pen ultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

FORM No. 5 - PERFORMANCE SECURITY OPTION 2– (Performance Bond)

*[**Note:** Procuring Entities are advised to use Performance Security–Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]*

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of Procuring Entity]*

Date: _____ *[Insert date of issue]*

PERFORMANCE BOND No.: _____

Guarantor: [*Insert name and address of place of issue, unless indicated in the letter head]*

1 By this Bond _____ as Principal (hereinafter called "the Contractor") and _____] as Surety (hereinafter called "the Surety"), are held and firmly bound unto _____] as Obligee (hereinafter called "the Procuring Entity") in the amount of _____ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the day of, 20__ , for _____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent here in provided for, are by reference made part hereof and are herein after referred to as the Contract.

3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the default, or shall promptly:

   1) Complete the Contract in accordance with its terms and conditions; or

   2) Obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or

   3) Pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions upto a total not exceeding the amount of this Bond.

4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the

issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named here in or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has here unto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day_____of 20 .

SIGNED ON_____on behalf of_____

By_____in the capacity of_____

In the presence of_____

SIGNED ON_____on behalf of_____

By_____in the capacity of_____

In the presence of_____

FORM NO. 6 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee] *[Guarantor letterhead or*

SWIFT identifier code] [Guarantor letterhead or SWIFT

identifier code]

Beneficiary: _____ *[Insert name and Address of* Procuring Entity*]* **Date:** _____ *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (herein after called "the Applicant") has entered into Contract No. _____ *dated* with the Beneficiary, for the execution of _____

2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ ( ) is to be made against an advance payment guarantee.

3. At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ ( )[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
   a) Has used the advance payment for purposes other than the costs of mobilization in respect of th e Works; or
   b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number at ___

5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the day of ___,2 _____ ,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

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[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Procuring Entity.*

[2] *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

FORM NO. 7: FORM RB 1

APPLICATION FOR PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

FOURTEENTH SCHEDULE (r.203(1))

FORM FOR REVIEW PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO……. OF…….….20……...

BETWEEN

….....APPLICANT (Review

Board) AND

…..... RESPONDENT (Procuring Entity)

Request for review of the decision of the…… (Name of the Procuring Entity of ……dated the…day of ……20…….in the matter of Tender No… ..... of ……20…. for .....(Tender description). REQUEST FOR REVIEW I/We……, the above-named Applicant(s), of address: Physical address……. P. O. Box No…… Tel. No……. Email ..... , hereby request the Public Procurement Administrative Review Board to review the whole/part of the above-mentioned decision on the following grounds, namely: 1. 2. By this memorandum, the Applicant requests the Board for an order/orders that: 1. 2. SIGNED ……. (Applicant) Dated on……. day of ……/…20……

FOR OFFICIAL USE ONLY

Lodged with the Secretary Public Procurement Administrative Review Board on……day of ……..…... 20……

SIGNED

Board Secretary

FORM NO. 8 BENEFICIAL OWNERSHIP DISCLOSURE FORM

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the Tenderer by meeting one or more of the following conditions:

- *Directly or indirectly holding 25% or more of the shares.*
- *Directly or in directly holding 25% or more of the voting rights.*
- *Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

Tender Reference No.: _____[*insert identification no*] Name of the Assignment: _____*[insert name of the assignment]* to: *[insert complete name of Procuring Entity]*

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

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

Details of beneficial ownership

Identity of Beneficial Owner	**Directly or indirectly holding 25% or more of the shares** **(Yes / No)**	**Directly or indirectly holding 25 % or more of the Voting Rights** **(Yes / No)**	**Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer** **(Yes / No)**
[include full name (last, middle, first), nationality, country of residence]			

OR

ii) We declare that there is no Beneficial Owner meeting one or more of the following conditions: directly or indirectly holding 25% or more of the shares. Directly or

indirectly holding 25% or more of the voting rights. Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.

OR

We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Tenderer shall provide explanation on why it is unable to identify any Beneficial Owner]

Directly or indirectly holding 25% or more of the shares. Directly or indirectly holding25% or more of the voting rights.

Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer]"

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

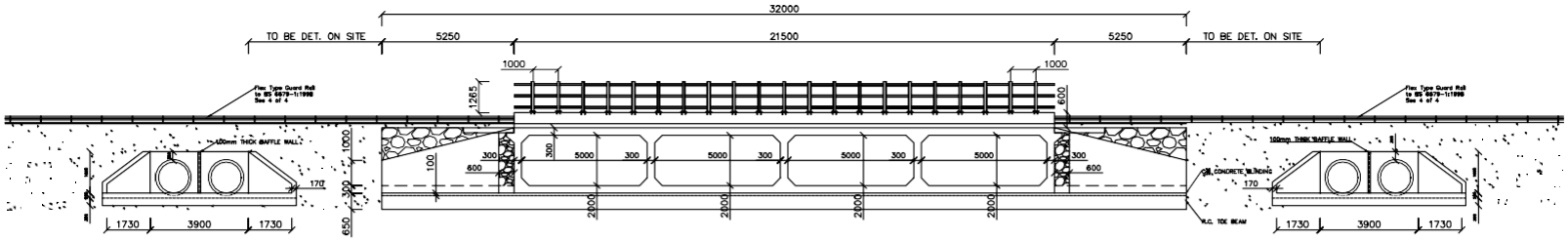
*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: ** [insert complete name of person duly authorized to sign the Tender]*

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

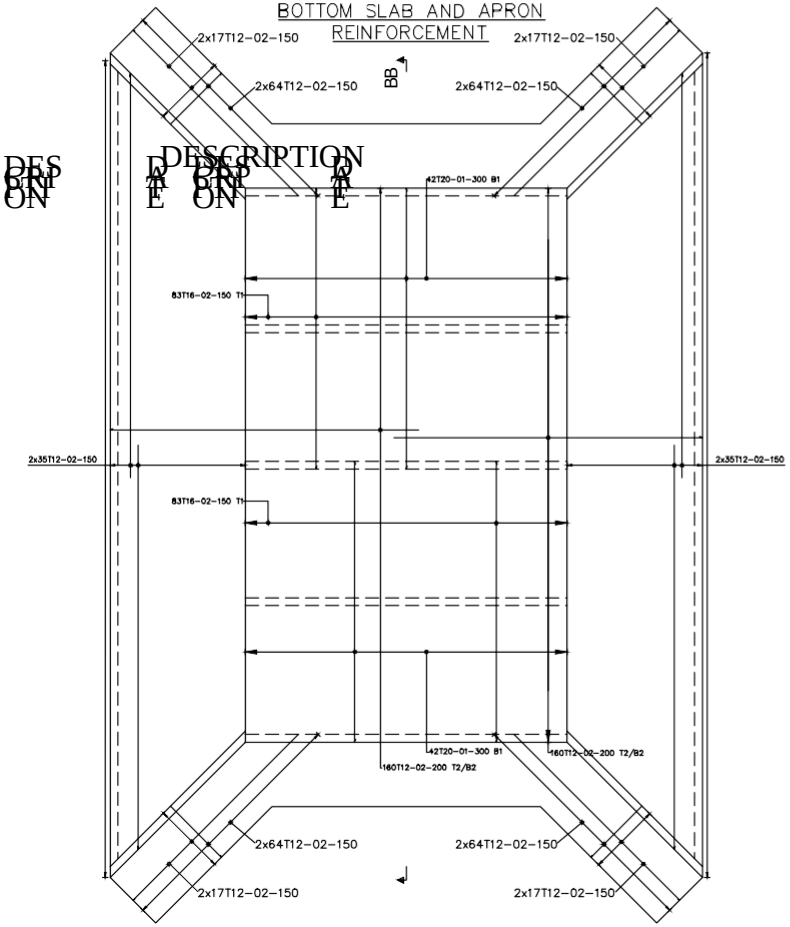
Signature of the person named above .....[insert signature of person whose name and capacity are shown above]

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

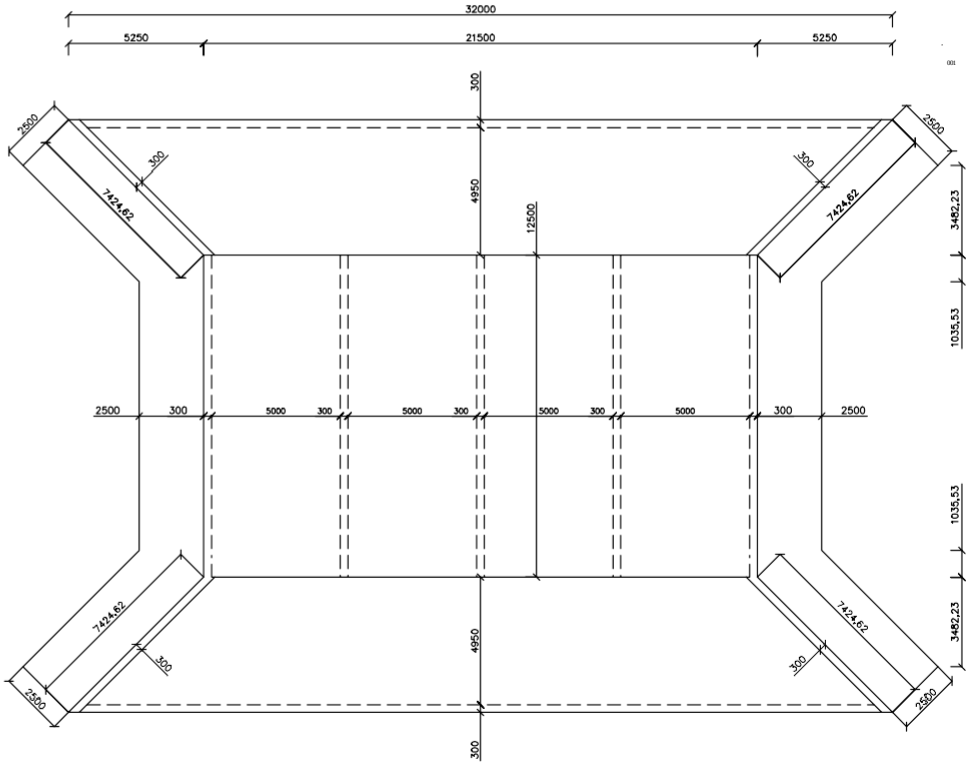
END ELEVATION



BOTTOM SLAB AND APRON REINFORCEMENT



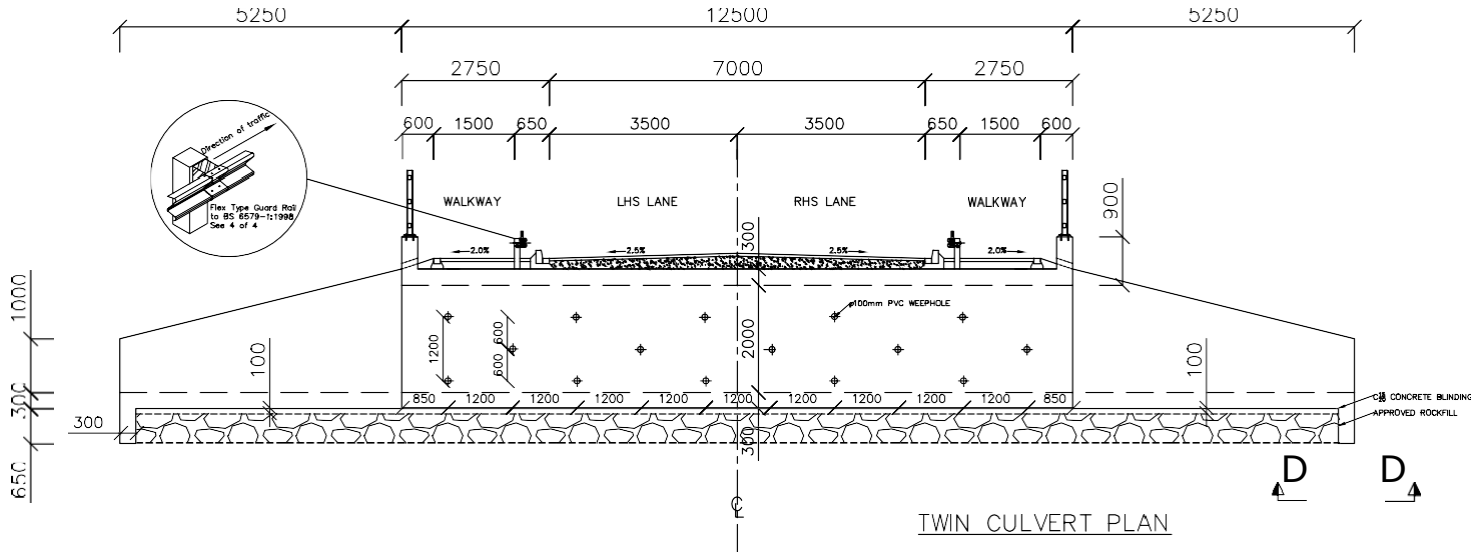
PLAN



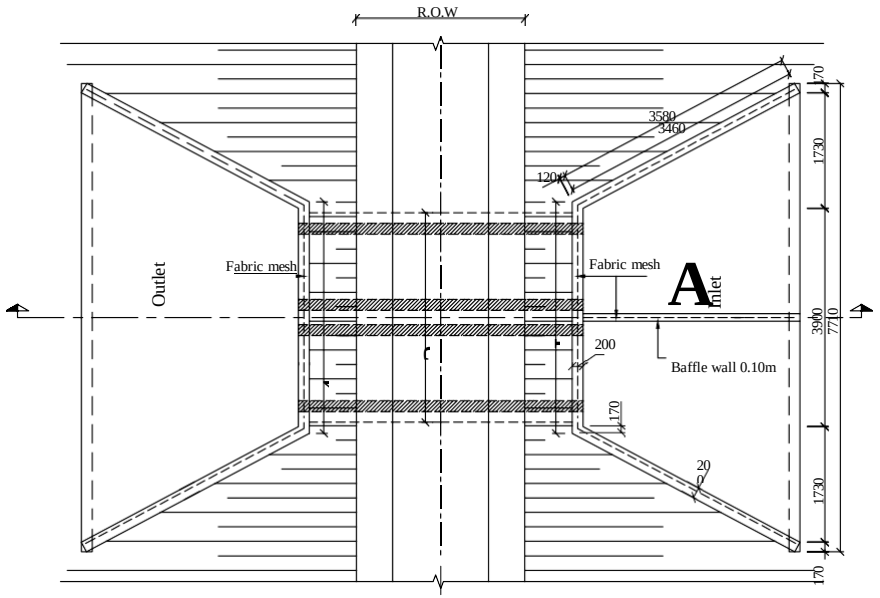
DESCRIPTION

				SCALE		DESIGNED BY:	DATE :
				HORIZONTAL: AS SHOWN		SURVEYED BY:	DWG No:
				VERTICAL: AS SHOWN		CHECKED BY:	SHEET : 1 OF 4

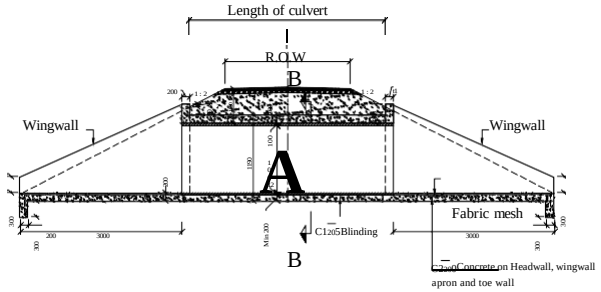
FRONT ELEVATION



TWIN CULVERT PLAN



TWIN CULVERT SECTION A–A



DESC.			SCALE HORIZONTAL: AS SHOWN VERTICAL: AS SHOWN			DATE : DWG No: 002 SHEET : 2 OF 4

13H20-06-1000 DOWELS

100x100
x3 SHS

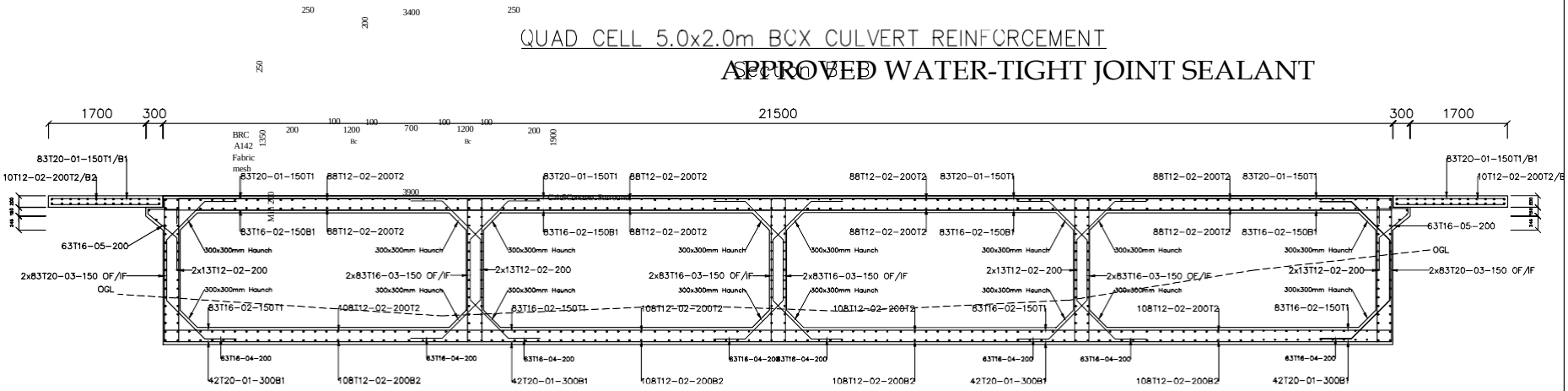
Ø76x2.
5 CHS

4No.Ø1
2x40
TAPERI
BOLTS

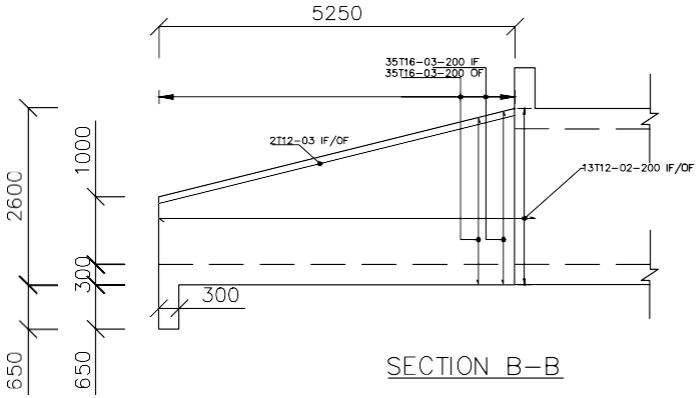
DESC

QUAD CELL 5.0x2.0m BOX CULVERT REINFORCEMENT

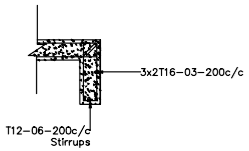
APPROVED WATER-TIGHT JOINT SEALANT



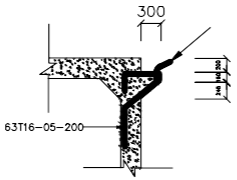
WINGWALL REINFORCEMENT



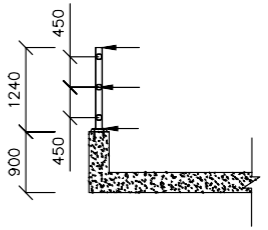
ICE BEAM DETAIL
Section D-D



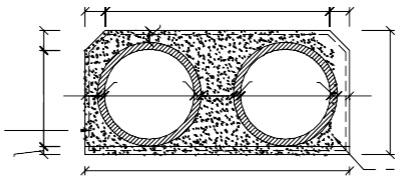
APPROACH SLAB SEAT DETAIL



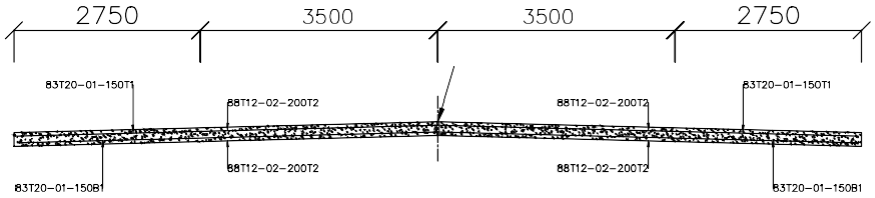
HAND RAIL DETAIL



SECTION B-B

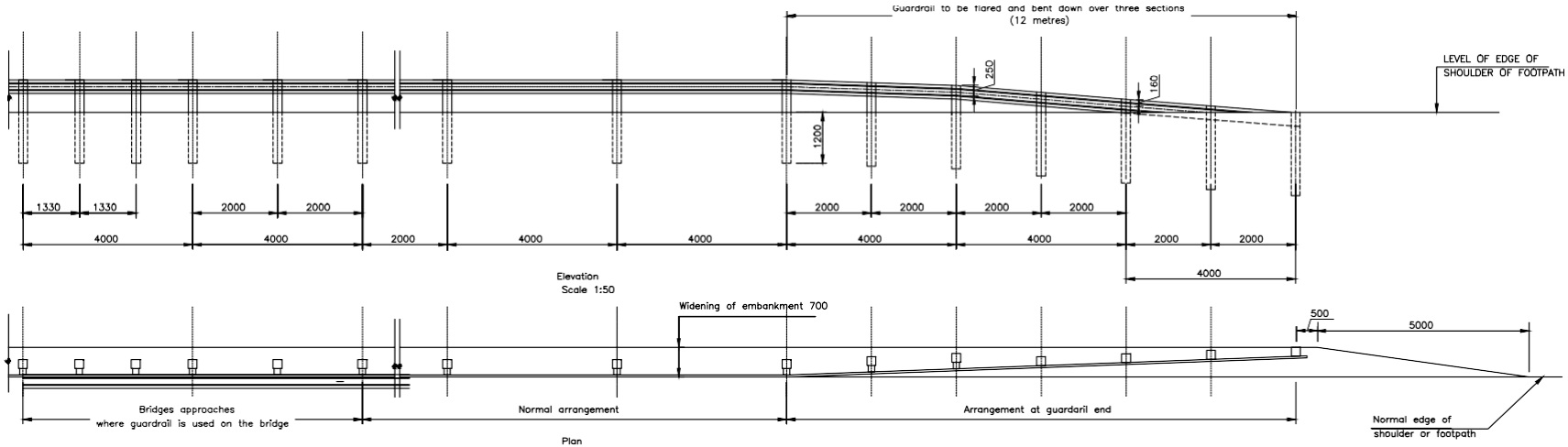


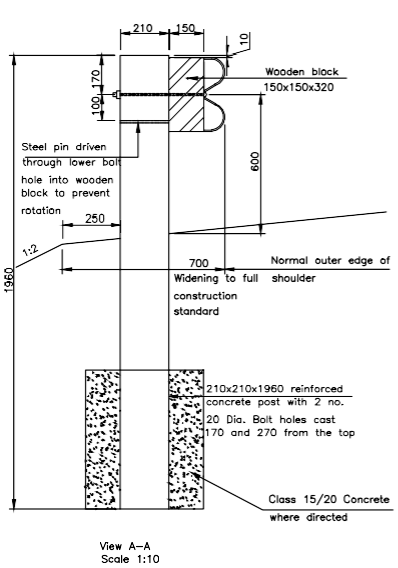
APPROACH SLAB DETAIL

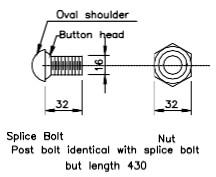


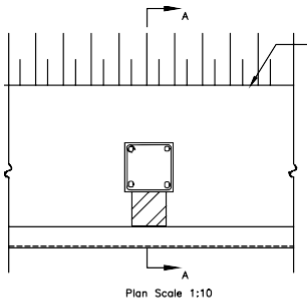
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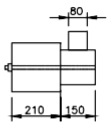
FLEX TYPE GUARD RAIL DETAIL

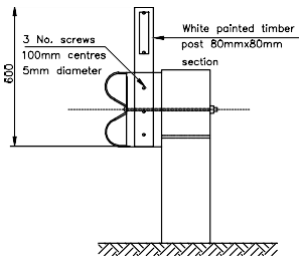


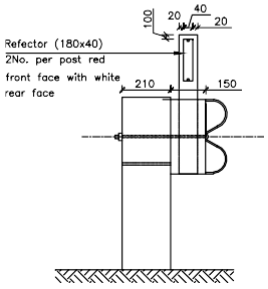


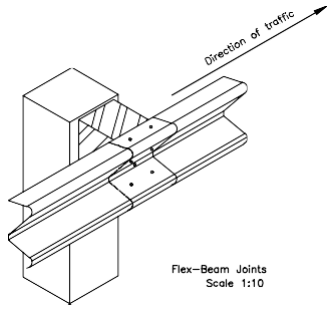












NOTES:

1. All dimensions are in millimetres unless otherwise stated
2. Lap guardrail sections in direction of traffic flow.
3. All bolts shall be button–headed and galvanised.
4. the guardrail shall be galvanised.
5. Start and end of guardrail section to be identical.
6. Compaction around posts to be the same as surrounding earthworks.
7. Normal shoulder width to be increased as shown where guardrail is required.
8. All nuts to be spot welded to the bolt.
9. Standard units also to be used on the end sections.
10. All spacer blocks shall be seasoned cypress and treated with copper/ chrome/ arsenic composition in accordance with B.S. 4072 to class 8 (average dry salt retention of 6.4 kg/m3)
11. The post shall be dug into the fill by method approved by the engineer.
12. Guardrail to be located as indicated in the plan and profile drawings and/or as directed by the engineer.

DESC			SCALE HORIZONTAL: AS SHOWN VERTICAL: AS SHOWN			DATE : DWG No: 004 SHEET : 4 OF 4