



KENYA RURAL ROADS AUTHORITY

**REPAIR AND POTHOLE PATCHING OF BONDO – MISORI (C840)
ROAD NUMBER: C840**

BID DOCUMENT

TENDER No. KeRRA/011/39/25/2019-20

NOVEMBER 2019

**DIRECTOR ROAD ASSET MANAGEMENT,
KENYA RURAL ROADS AUTHORITY,
P.O. BOX 48151-00100,
NAIROBI.**

**DIRECTOR GENERAL,
KENYA RURAL ROADS AUTHORITY,
P.O. BOX 48151-00100,
NAIROBI.**

REPAIR AND POTHOLE PATCHING OF BONDO-MISORI (C840) ROAD

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SECTION 1: FORM OF -BID SECTION

FORM OF BID

(NOTE: The Appendix forms part of the Bid. Bidders are required to fill all the blank spaces in this form of Bid and Appendix)

NAME OF CONTRACT:

REPAIR AND POT HOLE PATCHING OF BONDO – MISORI ROAD

TO: The Director General,
Kenya Rural Roads Authority
Barabara Plaza Block Airport South Road
P.O. Box 48151- 00100, NAIROBI

Sir,

1. Having examined the Conditions of Contract, Specifications, Bills of Quantities, and Drawings for the execution of the above-named works we, the undersigned, offer to construct and install such works and remedy any defects therein in conformity with the said Bills of Quantities, Conditions of Contract, Specifications and Drawings for the sum of

(Insert amount in words).

.....
.....
.....

(Insert amount in figures).....

as specified in the Appendix to Bid or such other sums as may be ascertained in accordance with the said Conditions.

2. We undertake, if our bid is accepted, to commence the works within twenty-eight (28) days of receipt of the Engineer's order to commence, and to complete and deliver the whole of the works comprised in the contract within the time stated in the Appendix to Bid.
3. If our bid is accepted we will, when required, obtain the guarantee of a Bank or other sureties (to be approved by you) to be jointly and severally bound with us in a sum not exceeding 5% of the above named sum for the due performance of the contract under the terms of a Bond to be approved by you.
4. We agree to abide by this bid for the period of one hundred and eighty (180) days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
5. We understand that you are not bound to accept the lowest or any bid you may receive.
6. On the basis of our previous experience we are fully experienced and competent in the type of work included in this BID and we have adequate financial resources to carry out the works described within the period for completion. We are in a position to fulfil the contract for which we have Bided.

Dated thisDay of20.....

Signature..... in the capacity of

Duly authorized to sign bids on behalf of (Name of Bidder)

.....

(Address of Bidder).....

(Name of Witness).....

(Signature of Witness).....

(Address of Witness).....

(Occupation of Witness).....

SECTION 2: APPENDIX TO FORM OF BID

**APPENDIX TO FORM OF BID (This
appendix forms part of the bid)**

CONDITIONS OF CONTRACT	CLAUSE	AMOUNT
Bid Security (Bid Security Only)		KShs 200,000.00
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	5 per cent of BID Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than 21 (twenty one) days after issuance of Order to Commence
Cash flow estimate to be submitted	14.3	Not later than 21 (twenty one) days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	KShs. 3,000,000.00
Period for commencement, from Engineer's order to commence	41.1	28 days
Time for completion	43.1	Twelve (12) months
Amount of liquidated damages	47.1	KShs. 100,000.00 per day
Limit of liquidated damages	47.1	5% of Contract Value
Defects Liability period	49.1	12 (Twelve) months
Percentage of Retention	60.3	10% of Interim Payment Certificate
Limit of Retention Money	60. 3	5% of Contract Price
Minimum amount of interim Certificates	60.2	KShs. 5,000,000.00
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.10	90 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	60.10	90 days
Amount of Advance	60.12	10% of BID sum
Advance Payment Security	60.12	10% of BID sum in the form of Unconditional Bank Guarantee
Appointer of Arbitrator/Adjudicator	67.3	The Chartered Institute of Arbitrators (Kenya)
Notice to Employer and Engineer	68.2	<p>The Employers address is: The Director General, Kenya Rural Roads Authority Barabara Plaza Block Airport South Road P.O. Box 48151- 00100, NAIROBI</p> <p>The Engineer's address is: Director (Road Asset Management), Kenya Rural Roads Authority, Barabara Plaza Block Airport South Road P.O. Box 48151- 00100, NAIROBI</p>

CONDITIONS OF CONTRACT	AMOUNT/DESCRIPTION	CONDITIONS OF CONTRACT CLAUSE
Approximate Weightings for Price Adjustment Formula	See Table A below	70.3
Weightings and Indices	Where necessary, in the table B below, bidders shall (a) indicate their amounts of local currency payment, (b) indicate their proposed source and base values of indices for the different foreign currency elements of cost, (c) derive their proposed weightings for local and foreign currency payment as indicated in table B below, and (d) list the exchange rates used in the currency conversion	70.3 and 70.4

Table A Approximate Weightings for Price Adjustment

<i>Description of Index</i>	<i>% Range of Weighting^a</i>
Fixed ("A")	8
Labour	8 – 12
Fuel	10 – 20
Oil & Lubricants	1 - 5
Equipment and Spares	35 – 40
Cement	8 – 12
Bitumen and Bituminous products	15 - 25
Total	100

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

Table B : Local Currency

<i>Index Code</i>	<i>Index Description</i>	<i>Source of Index</i>	<i>Base value and date</i>	<i>Bidder's related currency amount</i>	<i>Bidder's proposed weighting</i>
	Non adjustable	_____	_____	_____	a: _____ b: _____ c: _____ d: _____ e: _____ f: _____ g: _____ h: _____ i: _____ j: _____
			Total		1.00

Source of indices

- I Civil engineering cost indices shall be from Kenya National Bureau of Statistics. For equipment & spares the index shall be the National Average Consumer Index or the Official Indices from source country shall apply

Signature of Bidder.....Date

SECTION 3: FORM OF BID SECURITY

FORM OF BID SECURITY

Bid security from an approved Insurance Company by Public Procurement and Asset Disposal Act 2015 or a bank guarantee is acceptable. Attached herein, find the list of the approved Insurance Companies by (PPOA).

Note: The bidder shall complete only this form of Bid Security. No other Form of Bid Bond or any other forms of security will be accepted. Bidders who fail to comply with this requirement will be disqualified. **(NOTE: ALTERING THE TEXT IN THIS FORM OF BID SECURITY WILL RESULT IN DISQUALIFICATION)**

WHEREAS [*Name of bidder*].....

.....

(herein after called "the Bidder") has submitted his bid dated..... For the proposed **REPAIR AND POTHOLE PATCHING OF BONDO - MISORI ROAD**

hereinafter called "The Bid"

KNOW ALL MEN by these presents that we [*Name of Bank/ Insurance Company*]

.....

..... of [*Name of Country*]

..... having our registered offices at

..... (hereinafter called the Bank/Insurance Company) are bound unto the Director General, Kenya Rural Roads Authority (hereinafter called "the Employer") in the sum of

(in words) KShs.....

..... (In figures)

KShs.....

for which payment will be well and truly made to the said Employer the Bank/Insurance Company binds itself, its successors and assigns by these presents.

Signed for the said Bank/Insurance Company this.....day of20.....

THE CONDITIONS of this obligation are:

- 1) If the bidder withdraws his Bid during the period of bid validity specified by the Bidder on the Bid Form; or
- 2) If the Bidder refuses to accept the correction of errors in his bid; or
- 3) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid Validity
 - (i) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders when required or
 - (ii) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of any of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including Twenty Five (25) days after the date of expiration of the bid validity as stated in the Instructions to Bidders.

At the request of the Employer the Bid validity period may be extended by mutual agreement between the Employer and the Bidder and we undertake to extend the validity of this surety accordingly without you having to inform us of such an extension of the Bid validity period if within this period the Bidder has been notified of the acceptance of his Bid. This Surety shall remain valid up to the time the Contract Agreement has been executed.

AUTHORIZED SIGNATURE AND SEAL OF THE BANK/INSURANCE COMPANY

.....DATE NAME OF
SIGNATORY

.....
TITLE OF SIGNATORY

..... NAME OF
THE WITNESS

.....
SIGNATURE OF THE WITNESS: DATE ADDRESS OF
THE WITNESS

SECTION 4: INSTRUCTIONS TO BIDDERS

SECTION 4: INSTRUCTIONS TO BIDDERS TABLE

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CONDITIONS OF BID AND INSTRUCTIONS TO BIDDERS

A. GENERAL

1 SCOPE OF BID

- 1.1 The Employer, as defined in the Conditions of Contract Part II hereinafter “the Employer” wishes to receive bids for the construction of works as described in Section 1, clause 102 of the Special Specifications –“Location and extent of the Works”
- 1.2 The successful bidder will be expected to complete the Works within the period stated in the Appendix to Bid from the date of commencement of the Works.
- 1.3 Throughout these bidding documents, the terms bid and BID and their derivatives (bidder/Bidder, bid/Bided, bidding/Bidding etc) are synonymous, and day means calendar day. Singular also means plural.

2 SOURCE OF FUNDS

- 2.1 The source of funding is the **Government of Kenya**
- 2.2 The Budget for the works is Kshs. Forty Million (Kshs. 40,000,000.00)

3 CORRUPT PRACTICES

- 3.1 The Government requires that the bidders, suppliers, sub-contractors and supervisors observe the highest standard of ethics during the procurement and execution of such contracts. In this pursuit of this policy, the government;
 - (a) Defines for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in the execution, and
 - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Employer of the benefits of free and open competition
 - (b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract, and
 - (c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a government contract if it at any times determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government financed contract.

4 ELIGIBLE BIDDERS

- 4.1 This invitation to bid is open but **exclusively reserved** for local contractors who are legally registered or incorporated in the Republic of Kenya as of the time of bid submission. Registration with Kenya Rural Roads Authority as a Contractor is mandatory.
- 4.2 Bidders shall not have a conflict of interest. Bidders shall be considered to have conflict of interest, if they participated as a consultant in the preparation of the design, documentation or technical specifications of the works that are the subject of this bidding other than as far as required by the Employer.
- 4.3 A firm that is under a declaration of ineligibility by the Employer in accordance with clause 3, at the date of submission of the bid or thereafter, shall be disqualified.
- 4.4 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.

5 QUALIFICATION OF THE BIDDER

- 1.1 5.1 As a minimum, Bidders shall provide latest information set out below:
- (a) Certified Certificate of Incorporation by Registrar of Companies.
 - (a) Current (dated within 12Months before date of opening) Certified CR12 Certificate from the Registrar of Companies. This should be provided with Identification Documents of Directors. (ID or Passport) or certificate of registration, CR12 and IDS where the Directors are artificial persons.
 - (b) Certified Current Single Business permit.
 - (c) VAT/PIN Certificate.
 - (d) Valid Tax Compliance Certificate.
 - (e) Provide a Tender Security of KShs. 200,000 in the required format. The tender guarantee (security) will remain in force up to and including One hundred and Eighty (180) days after the date of bid submission.
 - (f) Registration with National Construction Authority "NCA 5 & 6 " and a current valid NCA practicing licence.
 - (g) Similar previous experience
 - (h) Declaration of current On-going works (The total value of remaining works (based on certified IPC) for the ongoing contracts must not exceed **KShs. Five Hundred million**)
 - (i) Equipment holding
 - (j) Professional and Technical personnel
 - (k) Submission of audited accounts or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last three [3] years for tenders to demonstrate: the current soundness of the applicant's financial position and its prospective long-term profitability, and capacity to have a cash flow amount, turnover and working capital as stipulated in the evaluation criteria.
 - (l) Current work load
 - (m) Litigation history
 - (n) Work Methodology
 - (o) Proof of Bank Account in the Tenderers' Name
 - (p) Properly filled, signed and stamped confidential Business Questionnaire.
 - (q) Properly filled, signed and stamped all schedules of supplementary information.
 - (r) Submit a written power of attorney authorizing the signatory of the bid to commit the bidder.
 - (s) Duly filled-in the Form of Bid and Appendix to form of bid
 - (t) Priced Bills of Quantities (Alterations must be counter signed by the Authorized signatory) and stamped
 - (u) Serialization of all the pages (this should be in the format of 1,2,3,4,5.....) from the first page to the last page.
 - (v) Attach a Pre Tender Site Visit Certificate duly endorsed by the Authorized KeRRA Staff.

Bidders shall also submit proposals of work methods and schedule in sufficient detail to demonstrate the adequacy of the bidders proposals to meet the technical specifications and the completion time referred to in Clause **Error! Reference source not found.** above.

6 ONE BID PER BIDDER

- 6.1 Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will be disqualified.

7 COST OF BIDDING

- 7.1 The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

8 SITE VISIT

- 8.1 The bidder is informed that pre-BID site visit is mandatory and he/she shall examine the Site of Works and its surroundings and obtain for himself all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the site shall be at the bidder's own expense.
- 8.2 The bidder and any of his personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such inspection, but only on the express condition that the bidder, its personnel and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission would not have arisen.
- 8.3 The Employer will conduct a Site Visit concurrently with the pre-bid meeting referred to in Clause 19. **The site visit is mandatory** for all bidders. Failure to attend the site visit by any bidder will lead to disqualification of his /her bid.

B. BIDDING DOCUMENTS

9 CONTENTS OF BIDDING DOCUMENTS

- 9.1 The set of documents comprising the BID includes the following together with any addenda issued in accordance with Clause 11:
- (a) Invitation to Bid
 - (b) Instructions to bidders
 - (c) Qualification Criteria
 - (d) Conditions of Contract - Part II (e)
Conditions of Contract - Part I (f)
Standard Specifications
 - (g) Special Specifications
 - (h) Form of Bid, Appendix to Form of Bid and Bid Security
 - (i) Bills of Quantities
 - (j) Schedules of Supplementary information
 - (k) Form of Contract Agreement (l)
Form of Performance Security (m)
Drawings
 - (n) BID addenda (BID notices)
- 9.2 The bidder is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the bidding documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Bids that are not substantially responsive to the requirements of the bidding documents will be rejected.

10 CLARIFICATION OF BIDDING DOCUMENTS

- 10.1 The prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter the term cable is deemed to include telex and facsimile) at the Employer's mailing address indicated in the Bidding Data.
- 10.2 The Employer will respond in writing to any request for clarification that he receives earlier than 7 days prior to the deadline for the submission of bids. Copies of the Employer's response to queries raised by bidders (including an explanation of the query but without identifying the sources of the inquiry) will be sent to all prospective bidders who will have purchased the bidding documents.

11 AMENDMENT OF BIDDING DOCUMENTS

- 11.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by issuing subsequent Addenda.
- 11.2 The Addendum thus issued shall be part of the bidding documents pursuant to Sub-Clause 10.1 and shall be communicated in writing or cable to all purchasers of the bidding documents. Prospective bidders shall promptly acknowledge receipt of each Addendum in writing or by cable to the Employer.
- 11.3 In order to afford prospective bidders reasonable time in which to take an Addendum into account in preparing their bids, the Employer may, at his discretion, extend the deadline for the submission of bids in accordance with Clause 22.

C. PREPARATION OF BIDS

12 LANGUAGE OF BID

- 12.1 The bid prepared by the bidder and all correspondences and documents relating to the bid exchanged by the bidder and the Employer shall be written in the English Language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an appropriate translation of pertinent passages in the above stated language. For the purpose of interpretation of the bid, the English language shall prevail.

13 DOCUMENTS COMPRISING THE BID

- 13.1 The bid to be prepared by the bidder shall comprise:
- (a) Duly filled-in the Form of Bid and Appendix to form of bid; (b) Bid security;
 - (c) Priced Bills of Quantities; (d) Work Methodology
 - (e) Schedules of information
 - (f) Qualification Criteria
 - (g) Any other materials required to be completed and submitted in accordance with the Instructions to Bidders embodied in these bidding documents.
- 13.2 These Forms, Bills of Quantities, work methodology and Schedules provided in these bidding documents shall be used without exception (subject to extensions of the Schedules in the same format).

14 BID PRICES

- 14.1 Unless explicitly stated otherwise in the bidding documents, the contract shall be for the whole works as described in Sub-Clause 1.1, based on the basic unit rates and prices in the Bill of Quantities submitted by the bidder.
- 14.2 The bidder shall fill in rates and prices for all items of Works described in the Bills of Quantities, whether quantities are stated or not.
- 14.3 All duties, taxes (excluding VAT) 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 bids, shall be included in the rates and prices and the total Bid Price submitted by the bidder.
- 14.4 Unless otherwise provided in the Bidding Data and Conditions of Particular Application the rates and prices quoted by the bidder are subject to adjustment during the performance of the contract in accordance with the provisions of Clause 70 of the Conditions of Contract.

15 CURRENCIES OF BID AND PAYMENT

- 15.1 Bids shall be priced in Kenya Shillings.

16 BID VALIDITY

- 16.1 The bid shall remain valid and open for acceptance for a period of 180 days from the specified date of bid opening specified in Clause 22.
- 16.2 In exceptional circumstances prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required nor permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension, and in compliance with Clause 17 in all respects.

17 BID SECURITY

- 17.1 The bidder shall furnish, as part of his bid, a bid security in the amount shown in the Appendix to Form of Bid.
- 17.2 The bid security shall be in the form of unconditional bank guarantee from a reputable bank selected by the bidder and located in Kenya, or insurance bond issued by a bonding or insurance company acceptable to the Employer and approved by the PPOA. The format of the Bid Security shall be in accordance with bid security included in Section 1. The bid security shall remain valid for a period of 25 days beyond the original validity period for the bid, and beyond any period of extension subsequently requested under Sub-Clause 16.2.
- 17.3 Any bid not accompanied by an acceptable bid security will be rejected by the Employer as non-responsive.
- 17.4 The bid securities of unsuccessful bidders will be discharged/ returned as promptly as possible but not later than 28 days after the expiration of the period of bid security validity.
- 17.5 The bid security of the successful bidder will be discharged upon the bidder signing the Contract Agreement and furnishing the required performance security.
- 17.6 The bid security may be forfeited:
- (a) if a bidder withdraws his bid, except as provided in Sub-Clause 24.2.
 - (b) if the bidder does not accept the correction of any errors, pursuant to Sub-Clause 29.2 or
 - (c) in the case of a successful bidder, if he fails within the specified time limit to: (i) sign the Contract Agreement or
(ii) furnish the necessary performance security.

18 NO ALTERNATIVE OFFERS

- 18.1 The bidder shall submit one offer, which complies fully with the requirements of the bidding documents.
- 18.2 The bid submitted shall be solely on behalf of the bidder. A bidder who submits or participates in more than one bid will be disqualified.
- 18.3 A price or rate shall be entered in **indelible ink** against every item in the Bills of Quantities with the exception of items which already have Prime Cost or Provisional sums affixed thereto. The bidders are reminded that no "nil" or "included" rates or "lump-sum" discounts will be accepted. The rates for various items should include discounts if any. Bidders who fail to comply will be disqualified.

19 PRE-BID MEETING

- 19.1 The bidders designated representative is invited to attend a pre-bid site visit and meeting, which will take place concurrently at the time, date and venue indicated on the invitation to tender notice. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 19.2 The bidder is requested as far as possible to submit any questions in writing or by cable, to reach the Employer not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted in accordance with the Minutes of the meeting, including the text of the questions raised and the responses given together with any responses prepared after the meeting, will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in Sub-Clause 8.1, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 or through the minutes of the pre-bid meeting.

20 FORMAT AND SIGNING OF BIDS

- 20.1 The bidder **shall** prepare one original of the documents comprising the bid as described in Clause 13 of these Instructions to Bidders, bound with the section containing the Form of Bid and Appendix to Bid, and clearly marked "ORIGINAL". In addition, the bidder shall submit two copies of the bid clearly marked "COPIES". In the event of discrepancy between them, the original shall prevail.
- 20.2 The original and copies of the bid shall be typed or written in **indelible ink** (in the case of copies, photocopies are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder pursuant to Sub-Clause 5.1(a). The person or persons signing the bid shall initial all pages of the bid where entries or amendments have been made.
- 20.3 The bid shall be without alterations, omissions or conditions except as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

D. SUBMISSION OF BIDS

21 SEALING AND MARKING OF BIDS

- 21.1 The bidder shall seal the original and each copy of the bid in separate envelopes duly marking the envelopes "ORIGINAL" and "COPY". The envelopes shall then be sealed in an outer separate envelope.
- 21.2 The inner and outer envelopes shall be:
 - (a) addressed to the Employer at the address provided in the Appendix to Form of Bid.
 - (b) bear the name and identification number of the contract. In addition to the identification required in sub-Clause 21.2, the inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause 23.1, and for matching purposes under Clause 24.
- 21.3 If the outer envelope is not sealed and marked as instructed above, the Employer will assume no responsibility for the misplacement or premature opening of the bid. If the outer envelope discloses the bidder's identity the Employer will not guarantee the anonymity of the bid submission, but this shall not constitute grounds for rejection of the bid.

22 DEADLINE FOR SUBMISSION OF BIDS

- 22.1 Bids must be received by the Employer at the address specified in Sub Clause 21.2 not later than the time and date specified in the letter of invitation to bid or as amended in addenda.
- 22.2 The Employer may, at his discretion, extend the deadline for the submission of bids through the issue of an Addendum in accordance with Clause 11 in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

23 LATE BIDS

- 23.1 Any bid received by the Employer after the deadline for submission of bids prescribed in Clause 22 will be returned unopened to the bidder.

24 MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF BIDS

- 24.1 The bidder may modify, substitute or withdraw his bid after bid submission, provided that written notice of modification or withdrawal is received by the Employer prior to the prescribed deadline for submission of bids.
- 24.2 The bidder's modification, substitution or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause 21, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.

- 24.3 No bid may be modified subsequent to the deadline for submission of bids, except in accordance with Sub-Clause 28.1.
- 24.4 Any withdrawal of a bid during the interval between the deadline for submission of bids and expiration of the period of bid validity specified in Clause 17 may result in the forfeiture of the bid security pursuant to Sub-Clause 17.6.

E. BID OPENING AND EVALUATION

25 BID OPENING

- 25.1 The Employer will open the bids, including withdrawals and modifications made pursuant to Clause 24, in the presence of bidders' designated representatives who choose to attend, at the time, date and location specified in the letter of invitation to bid or as amended in the addenda. The bidders' representatives who are present shall sign a register evidencing their attendance.
- 25.2 Envelopes marked "WITHDRAWAL" and "SUBSTITUTION" shall be opened first and the name of the bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 24 shall not be opened.
- 25.3 The bidder's name, the Bid Prices, including any bid modifications and withdrawals, the presence (or absence) of bid security, and any such details as the Employer may consider appropriate, will be announced by the Employer at the opening. Subsequently, all envelopes marked "MODIFICATION" shall be opened and the submissions therein read out in appropriate detail. No bid shall be rejected at bid opening except for late bids pursuant to Clause 23.
- 25.4 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub-Clause 25.3.
- 25.5 Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.

26 PROCESS TO BE CONFIDENTIAL

- 26.1 Information relating to the examination, evaluation and comparison of bids, and recommendations for the award of contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.

27 CLARIFICATION OF BIDS AND CONTACTING OF THE EMPLOYER

- 27.1 To assist in the examination, evaluation, and comparison of bids, the Employer may, at its discretion, ask any bidder for clarification of its bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause 29.
- 27.2 Subject to Sub-Clause 26.1, no bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 27.3 Any effort by the bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the bidder's bid.

28 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

- 28.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid (a) has been properly signed; (b) is accompanied by the required securities; (c) is substantially

responsive to the requirements of the bidding documents; and (d) provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to Sub-Clause 28.2.

- 28.2 A substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the bidding documents without material deviation or reservation and has a valid BID bank guarantee. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the bidder's obligations under the contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 28.3 If a bid is not substantially responsive, it will be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

29 CORRECTION OF ERRORS

- 29.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (a) Where there is a discrepancy between the amounts in figures and in words, the amount in words as indicated in the Form of Bid will govern; and
 - (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the line item total will govern and the unit rate will be adjusted accordingly in such a way that the BID Sum remains unaltered.
- 29.2 Any error by the Bidder in pricing or extending the Bills of Quantities or carrying forward to the summary or BID Sum, shall be corrected in such a way that the BID Sum remains unaltered and the Bidder shall within seven (7) days after issuance of the written notice by the Engineer, or such further time as the Engineer may allow, correct his BID in such a manner as may be agreed or directed by the Engineer failing which the BID may be absolutely rejected and the Bid Security forfeited in accordance with Sub-Clause 17.6 . Any discrepancy that results in variation of more than 15% of the corrected figure shall result in rejection of the Tender.

30 EVALUATION AND COMPARISON OF BIDS

- 30.1 The Employer will then evaluate and compare only the bids determined to be substantially responsive in accordance with Clauses 28 and 29. Any variation, deviation and alternative offers will be rejected and shall not be taken into account in bid evaluation.
- 30.2 If the bid, which results in the lowest Evaluated Bid Price is seriously unbalanced or front loaded in relation to the Engineer's estimate of the items of work to be performed under the contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated contract payments, the Employer may require that the amount of the Performance Security set forth in Clause 35 be increased at the expense of the bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the contract.
- 30.3 Preference shall be applied in accordance with clause 157 of the Public Procurement and Asset Disposal Act 2015 and Clause 28 of the accompanying regulations of 2006 as revised in legal notice No. 58 of 8th June 2011.

F. AWARD OF CONTRACT

31 AWARD

- 31.1 Subject to Clause 32, the Employer will award the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest Evaluated Bid Price pursuant to Clause 30, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of Sub-Clause 4.1, and (b) qualified in accordance with the provisions of Clause 5.

32 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 32.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

33 NOTIFICATION OF AWARD

- 33.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing or by cable confirmed by registered letter that its bid has been accepted. This letter (hereinafter and in the Conditions of Contract called "Letter of Acceptance") shall specify the sum, which the Employer will pay the Contractor in consideration of the execution and completion of the works and the remedying of any defects therein by the Contractor as prescribed by the contract (hereinafter and in the Conditions of Contract called "the Contract Price").
- 33.2 At the same time that the Employer notifies the successful bidder that his bid has been accepted, the Employer shall notify the other bidders that their bids have been unsuccessful and that their bid securities will be returned as promptly as possible, in accordance with Sub- Clause 17.4.

34 SIGNING OF AGREEMENT

- 34.1 At the same time that the Employer notifies the successful bidder that its bid has been accepted, the Employer will send the bidder the Agreement in the form provided in the bidding documents, incorporating all agreements between the parties.

After 14 days of receipt of the Agreement, the successful bidder shall sign the Form of Agreement and return it to the Employer, together with the required performance security.

35 PERFORMANCE SECURITY

- 35.1 Within 28 days but not earlier of receipt of the Letter of Acceptance from the Employer, the successful bidder shall furnish to the Employer a performance security in the form stipulated in the Conditions of contract. The form of performance security provided in Section 8 of the bidding documents shall be used.
- 35.2 The successful bidder shall provide a performance security in the form of an Unconditional Bank Security from a reputable bank located in Kenya.
- 35.3 Failure by the successful Bidder to lodge the required Performance Guarantee within 28 days of the receipt of the Letter of Acceptance shall constitute sufficient grounds for the annulment of the Award and forfeiture of the Bid Surety; in which event the Employer may make the award to another bidder or call for new bids.

36 CONTRACT EFFECTIVENESS

- 36.1 The Contract will be effective only upon signature of the Agreement between the Contractor and the Employer.

SECTION 5: QUALIFICATION CRITERIA

SECTION 5: QUALIFICATION CRITERIA

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

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Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
1. Eligibility							
1.1	Eligibility	Nationality in accordance with Sub-Clause 4.1.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.2	Conflict of Interest	No conflicts of interest in Sub-Clause 4.2.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.3	Employer Ineligibility	Not having been declared ineligible by the Employer, as described in Sub-Clause 4.3.	Must meet requirement	Existing JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.4	Incorporation & Registration	Pursuant to sub clause 4.1 the following shall be provided; - Certified Copy of Certificate of incorporation to show that the applicant is a registered company and legally authorized to do business in Kenya - Proof of registration with the National Construction Authority Category NCA 5 and 6 for Road Works.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Section 7, Schedule 1

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Non-performance of a contract did not occur within the last five (5) years prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the applicant have been exhausted.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Section 7, Schedule 6
2.2	Pending Litigation	All pending litigation shall in total not represent more than thirty percent (30%)] of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Section 7, Schedule 11
3. Financial Situation							
3.1	Financial Performance	Submission of audited balance sheets or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last three [3] years to demonstrate: (a) the current soundness of the applicants financial position and its prospective long term profitability, and	Must meet requirement (a) Must meet requirement	N / A (a) N / A	Must meet requirement (a) Must meet requirement	N / A (a)N / A	Section 7, Schedule 10

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
		(b) capacity to have a cash flow amount of minimum KShs 5 Million equivalent working capital	(b) Must meet requirement	(b) Must meet requirement	(b) N / A	(b) N / A	
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of KShs 50 Million calculated as total certified payments received for contracts in progress or completed, within the last three [(3)] years	Must meet requirement	Must meet requirement	Must meet ((100-50)/(n-1))% of the requirement where n= number of joint venture members	Must meet fifty (50%) percent of the of the requirement	Section 7, Schedule 10
4. Experience							
4.1	General Construction Experience	Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last Five [5] years prior to the applications submission deadline	Must meet requirement	N / A	Must meet requirement	N / A	Section 7, Schedule 6
4.2(a)	Specific Construction Experience	Participation as contractor, management contractor or subcontractor, in at least one (1) contract within the last five (5) years, each with a value of at least KShs. 10 Million , that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics as described in Section 11, Scope of Works	Must meet requirement	Must meet requirement	N / A	Must meet requirement for one contract	Section 7, Schedule 6

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
4.2(b)		b) For the above or other contracts executed during the period stipulated in 4.2(a) above, a minimum construction experience in at least one (1) of: <ul style="list-style-type: none"> - Repair & rehabilitation of bitumen roads. - New Construction to bitumen standard. - Major gravelling and drainage works including bridges and Box Culverts 	Must meet requirements	Must meet requirement	N / A	Must meet requirement	Section 7, Schedule 6
4.3	Work Methodology	Submission of a brief work methodology in accordance with Sub-Clause 5.3	Should demonstrate understanding of the scope of works and other general requirements	Should demonstrate understanding of the scope of works and other general requirements	N/A	N/A	Section 7, Schedule 12
5. Equipment holding							
5.1	Minimum number of Equipment	The bidder must indicate the minimum the core plant and equipment considered by the company to be necessary for undertaking the project together with proof of ownership or Hire	Must meet the requirement	Must meet requirement	Must meet requirement	N/A	Section 7, Schedule 5

Qualification Criteria							Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
6. Current Commitment							
6.1	On-going contracts	The total value of remaining works (based on certified IPC) for the ongoing contracts with the Authority, must not exceed KShs. 500 Million.	Must meet requirements	Must meet requirements	Must meet ((100-50)/(n-1))% of the requirement where n= number of joint venture members	N/A	Section 7, Schedule 7
7. Site Staff							
1	Site Agent	The site staff shall possess minimum levels set below; Qualification = BSc. Civil Eng Reg. Eng General Experience = 7 yrs Specific Experience = 4 Yrs	Must meet requirements	Must meet requirements	N/A	N/A	Section 7, Schedule 4
2	Senior Foreman	Qualification =.Dip. Civil Eng General Experience = 5 yrs Specific Experience = 3 Yrs					
3	Site Surveyor	Qualification = Dip.Survey General Experience = 5 yrs Specific Experience = 3 Yrs					
4	General Foremen (2 NO.)	Qualification = Dip. Civil Eng General Experience = 5 yrs Specific Experience =3 Yrs					

SECTION 6: CONDITIONS OF CONTRACT

SECTION 6A: 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
E-mail: fidic@pobox.com
WWW: <http://www.fidic.org>

Or

The Association of Consulting Engineers of Kenya
P.O Box 72643-00200
NAIROBI
The Professional Centre
Parliament Road
Nairobi-Kenya Tel:
2249085
E-mail: acek@mitsuminet.com

SECTION 6B: 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.

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CONDITIONS OF CONTRACT PART II (CONDITIONS OF PARTICULAR APPLICATION)

SUB-CLAUSE 1.1 – DEFINITIONS

Amend this sub-clause as follows:

- (a) (i) The “Employer” is the Government of Kenya, represented by the Director General, Kenya Rural Roads Authority.
- (iv) The “Engineer” is the Director Roads Assets Management ,Kenya Rural Roads Authority.

(b) (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 “BID” is synonymous with “tender” and the word “Appendix to BID” with “Appendix to Tender” and the word “BID 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.

SUB-CLAUSE 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)
- (c) Determining an extension of time under Clause 44; (d) Issuing a variation under Clause 51;
- (e) Fixing rates or prices under Clause 52

SUB-CLAUSE 5.1 - LANGUAGE AND LAW

- a) 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.
- b) The Laws applicable to this Contract shall be the Laws of the Republic of Kenya.

SUB-CLAUSE 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 Drawings;

(9) The priced Bills of Quantities

(10) Other documents as listed in the Appendix to form of Bid

SUB-CLAUSE 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 28 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee as stipulated by the Employer in the Appendix to Bid. *The Performance Security shall be 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 Engineer determines an addition to the Contract Price as a result of a change in cost, the Contractor, at the Engineer's written request, shall promptly increase the value of the Performance Security by an equal percentage.

SUB-CLAUSE 10.2 - VALIDITY OF PERFORMANCE SECURITY

The Performance Security shall be valid until a date 28 days after the date of issue of the Substantial Completion Certificate. The security shall be returned to the Contractor within 14 days of expiration.

SUB-CLAUSE 10. 3- CLAIMS UNDER PERFORMANCE SECURITY

Delete the entire sub-clause 10.3.

SUB-CLAUSE 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 BID" 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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 (14) fourteen days of being requested to do so.

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 for the following public holidays per calendar year during which the Contractor shall not be permitted to work.

- || New Years Day (1st January)
- || Good Friday
- || Easter Monday
- || Labour Day (1st May)
- || Madaraka Day (1st June)
- || Idd Ul Fitr
- || Mashujaa Day (20th October)
- || Jamhuri Day (12th December)
- || Christmas Day (25th December)
- || Boxing day (26th December)

The Contractor shall also allow per calendar year for a further two 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.

SUB-CLAUSE 14.3 - CASH FLOW 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.

SUB-CLAUSE 15.1 - CONTRACTOR'S SUPERINTENDENCE

Add the following at the end of the first paragraph of Sub-Clause 15.1:

"The Contractor shall, within seven (7) 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."

Add the following Sub-clause 15.2

SUB-CLAUSE 15.2 - LANGUAGE ABILITY AND QUALIFICATIONS OF CONTRACTOR'S AUTHORISED AGENT

The Contractor's Representative on the site shall be the Site Agent who shall be a Professional Engineer registered by The Engineer's Act, 2011 or have equivalent status approved by the Engineer and shall be able to read and write in English.

The Contractor's Agent or Representative shall have at least 7 years relevant experience as a Professional Engineer i.e. 7 years from the date of registration as an Engineer.

SUB-CLAUSE 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:

SUB-CLAUSE 16.3 - QUALIFICATION AND LANGUAGE ABILITY OF SUPERINTENDING STAFF

The Contractor's superintending staff shall meet the following minimum qualifications:

- (a). 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.
- (b) 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 7.
 - || Site Agent
 - || Deputy Site Agent
 - || Site Engineer
 - || Senior Foreman
 - || Site Surveyor
 - || Foremen
- (c) The key staff listed below must have minimum experience set out in Section 5, Part 7:
 - || Site Agent
 - || Deputy Site Agent
 - || Site Engineer
 - || Senior Foreman
 - || Site Surveyor
 - || Foremen
- (d) 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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 (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 off 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.

SUB-CLAUSE 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

SUB-CLAUSE 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"

SUB-CLAUSE 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 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.

SUB-CLAUSE 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) to (h) of the General Conditions of Contract”.

SUB-CLAUSE 23.2 – MINIMUM AMOUNT OF INSURANCE

Add the following at the end of this Clause:

“.. with no limits to the number of occurrences”.

SUB-CLAUSE 25.1 – EVIDENCE AND TERMS

Amend Sub-Clause 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 25.6, 25.7

SUB-CLAUSE 25.6 – 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.

SUB-CLAUSE 25.7 – 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.

SUB-CLAUSE 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.”

SUB-CLAUSE 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 Sub-Clause 29.2:

SUB-CLAUSE 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 after Clause 34.1

SUB-CLAUSE 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.

SUB-CLAUSE 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 at 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 Departments 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 subparagraph (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.

SUB-CLAUSE 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 Employer 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.

SUB-CLAUSE 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 employment at the time of the acceptance of the BID shall be recruited by the Contractor from the Labour Exchange or Exchanges nearest to the site or sites of the work.

SUB-CLAUSE 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.

SUB-CLAUSE 34.7 – LABOUR STANDARD

- (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.

SUB-CLAUSE 34.8 – MINORITIES AND PERSONS WITH DISABILITIES

The Contractor shall ensure that no more than Two Thirds of either gender is engaged in the Contract.

Add the following Sub-Clause 35.2 and 35.3.

SUB-CLAUSE 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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”.

SUB-CLAUSE 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.

SUB-CLAUSE 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.”

SUB-CLAUSE 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.”

SUB-CLAUSE 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.”

SUB-CLAUSE 48.2 – TAKING OVER OF PARTS OF WORKS

Add the following paragraphs at the end of this Sub-Clause:

The minimum section for Taking Over shall be as described in the Special Specifications.

SUB-CLAUSE 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.

Modification to Clause 52(3)

SUB-CLAUSE 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.

SUB-CLAUSE 54.1 – CONTRACTORS 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.

SUB-CLAUSE 55.2 – OMISSIONS 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:

SUB-CLAUSE 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: – CERTIFICATES AND PAYMENTS

Clause 60 of the General Conditions is deleted and substituted with the following:-

SUB-CLAUSE 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.

SUB-CLAUSE 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 30 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.

SUB-CLAUSE 60.3 – PAYMENT OF RETENTION MONEY

A retention amounting to the percentage stipulated in the Appendix to Bid shall be held by the Employer 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.

Bank Retention Guarantees shall be accepted in lieu of cash retentions

SUB-CLAUSE 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.

SUB-CLAUSE 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.

- (a) Any further sums which the Contractor considers to be due; and
- (b) 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.

SUB-CLAUSE 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;

- (a) The final value of all work done in accordance with the Contract
- (b) 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 reasonable require and shall make such changes in the draft as may be required.

SUB-CLAUSE 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.

SUB-CLAUSE 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:

- (a) The final value of all work done in accordance with the Contract;

- (b) 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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.
- (ii) In the case of the Final Payment Certificate pursuant to Sub-Clause 60.8, within the time stated in the Appendix to Form Of Bid, after the Engineer has signed the Final Payment Certificate.
- (iii) 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 bank lending rates obtained from Central Bank of Kenya. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlements under Clause 69 or otherwise.

SUB-CLAUSE 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.

SUB-CLAUSE 60.12 – ADVANCE PAYMENT

"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 equivalent to a maximum of ten (10) percent of the Contract Price named in the Letter of Acceptance. Payment of such advance amount will be due under a separate certification by the Engineer after:

- (i) Provision by the Contractor of the Performance Security in accordance with Clause 10 of the Conditions of Contract, and
- (ii) Provision by the Contractor of a Bank Guarantee that 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.

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.

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 amount of the contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by the means of the formula:

$$RI = \frac{A(X_2 - X_1)}{80 - 20}$$

Where:

RI = the amount to be reimbursed.

A = the amount of the advance which has been granted.

X_2 = 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_1 = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

With each reimbursement the guarantee will be reduced accordingly.

The value of the Advance Payment Guarantee may be reduced prorata. However, the value of the Guarantee should at any instance be equivalent or higher than the unrecovered amount of the Advance Payment.

SUB-CLAUSE 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.

(a) No credit shall be given unless the following conditions shall have been met to the Engineers satisfaction

- (i) The materials are in accordance with the specifications for the works;
- (ii) The materials have been delivered to site and are properly stored and protected against loss, damage or deterioration;

- (iii) 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;
- (iv) 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;
- (v) The materials are to be used within a reasonable time.
- (b) 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;
- (c) 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.

SUB-CLAUSE 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 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. "

SUB-CLAUSE 67.2 – AMICABLE SETTLEMENT

Delete the entire sub-clause 67.2 and replace with the following;

67.2 (a) Amicable Settlement

"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."

67.2 (b) Adjudication

The adjudication shall commence when it shall be referred in writing to the Dispute Adjudication

Board (the "Board") for its decision. Such reference shall state that it is made under this clause.

1. Unless the member or members of the board have been previously mutually agreed upon by the parties and named in the Contract, the parties shall within 28 days of the contract commencement date jointly ensure the appointment of the Board. The Board shall comprise of suitably qualified persons as members, the number of members being either one or three as stated in the Appendix to form of Tender. If the board is to comprise three members each party shall nominate one member and the two members shall mutually agree upon and appoint the third member (who shall act as chairman)
2. The terms of appointment of the Board shall include: -
 - a) An hourly rate which if not otherwise agreed shall be the average of the rates set by the Chartered Institute of Arbitrators for the class of membership of the member save that the rates for associate membership shall apply to non • members;
 - b) A retainer monthly rate equal to 12 times the hourly rate;
 - c) The hourly rate shall apply when the board members are attending site, travelling and/or engaged in actual dispute resolution work. A member of the board throughout his appointment will act independently at all times without bias or favour;
 - d) Members of the board to act impartially and in accordance with the Contract;
 - e) Undertakings by the parties (to each other and to Board) that the members of the Board shall under no circumstances be liable for anything done or omitted in the discharge of their functions unless the act or omission is shown to have been in bad faith;
 - f) The Board shall be free to pay and seek refund from the parties of any expenses paid out by members of the board in connection with their work;
 - g) The Employer and the Contractor shall each be responsible for paying one half of the Board's remuneration.

The appointment of any member of the Board may be terminated (other than on a member's own initiative) only by mutual agreement of the Employer and the Contractor. The appointment of each member of the Board shall expire when the discharge referred to in sub-clause 60.7 shall have become effective, or at such other time as the parties may mutually agree.

3. The appointment of any member of the Board may be terminated (other than on a member's own initiative) only by mutual agreement of the Employer and the Contractor. The appointment of each member of the Board shall expire when the discharge referred to in sub-clause 60.7 shall have become effective, or at such other time as the parties may mutually agree.
4. If the parties so agree, they may at any time, appoint a suitably qualified person or persons to replace (or to be available to replace) any or all members of the Board. Unless the parties agree otherwise, the appointment will cease if a member of the Board declines to act or is unable to act as a result of death, disability, resignation or termination of appointment. If any of such circumstances occur and no such member is available, the member shall be replaced in the same manner as he had been nominated or agreed upon.
5. If any of the following conditions apply, namely: -

- a) The parties fail to agree upon the appointment of the sole member of a one-person Board within 28 days of the commencement date;
- b) Either party fails to appoint a member in a Board of three members, within 28 days of the commencement date;
- c) The two members of the Board fail to agree upon the appointment of the third member (to act as chairman) for a Board of three members within 28 days from date of appointment of latest member;
- d) The parties or the members fail to appoint a replacement member of the Board within 28 days of the date on which a member of the Board declined to act or is unable to act as a result of death, disability, resignation or termination of appointment;

then the appointing body or official named in the Appendix to Form of Tender shall appoint such member of the Board on request of any party and such appointment shall be final and conclusive.

67.2 (c) Dispute Adjudication Board's Decision

1. When in accordance with sub-clause 67.2 (b) a dispute is referred by one party to the Board, a copy of such reference shall be sent by that party to the other party and (for information) to the Engineer. The parties shall promptly make available to the Board all such additional information, further access to the site, and appropriate facilities as the Board may require for the purposes of rendering a decision.
2. The rules published by the Chartered Institute of Arbitrators Kenya branch shall apply.
3. The Board shall have full power among other things to open up, review and revise any opinion, instruction, determination, certificate or valuation of the Engineer related to the dispute. No later than the 28th day after the day on which it received such a reference the Board acting as a panel of experts and not as arbitrator(s) shall give notice of its decision to the parties and for information to the Engineer. Such decision, which shall be reasoned, shall state that it is given under this Sub-Clause.
4. 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 as well as the Engineer shall give effect forthwith to every decision of the Board notwithstanding the fact that there may be a party dissatisfied as shown thereunder.
5. If either party is dissatisfied with the Board's decision, then either party on or before the 28th (twenty eighth) day after the day on which it received notice of such decision, may refer the decision to Arbitration.
6. If the Board has given notice of its decision as to a matter in dispute to the Employer, the Contractor and the Engineer and no notice of dissatisfaction has been given by either party on or before the 28th (twenty eighth) day after the day on which the parties received the Board's decision, then the Board's decision shall become final and binding upon the Employer and the Contractor.

67.2 (d) Failure to Comply with the Board's Decision

Where neither party has given notice of dissatisfaction within the period in Sub-Clause 67.2 (c) and Board's related decision, if any has become final and binding either party may, if the other party fails to comply with such decision and without prejudice to any other rights it may have, refer the failure itself to Arbitration under Sub-Clause 67.3. The provisions of Sub-clause 67.2 shall not apply to any such reference.

67.2 (e) Expiry of the Board's Appointment

When the appointment of the members of the Board, including any replacement, has either been terminated or has expired, any such dispute referred to in Sub-clause 67.2 shall be finally settled by

Arbitration pursuant to Sub-clause 67.3. The provisions of Sub-clause 67.2 shall not apply to any such reference.

SUB-CLAUSE 67.3(D) – ARBITRATION

Delete all the words from line 6 onwards beginning with the words "unless otherwise" up to line 8 ending with the words "... under such rules", and substitute with the following:

"by an arbitrator to be agreed upon between the parties or failing agreement to be nominated on the application of either party by the appointee designated in the form of Tender for the purpose and any such referee shall be deemed to be a submission to arbitration within the meaning of the Arbitration Laws of the Republic of Kenya.

SUB-CLAUSE 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:

Director General
Kenya Rural Roads Authority
P.O. Box 48151 – 00100
NAIROBI.

- b. The Engineer's address is: Director
Road Asset Management
Kenya Rural Roads Authority
P.O. Box 48151 – 00100
NAIROBI.

SUB-CLAUSE 68.4 – CORRESPONDENCES

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.

CLAUSE 69 – DEFAULT OF EMPLOYER

Delete in Sub-Clause 69.1 (a) the words ("28 days") and insert the words "ninety (90) days". Delete Sub-Clause 69.1 (c)

Delete in Sub-Clause 69.4 line 4 the words "(28 days)" and insert the words "sixty (60) days".

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 Sub-Clause 69.4 of General Conditions of Contract Part I, insert at the end ----"The amounts of such costs which shall be added to the Contract 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 - PRICE ADJUSTMENT

The amounts payable to the Contractor, in various currencies pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the cost of labour, Contractor's Equipment, Plant, materials, and other inputs to the Works, by applying to such amounts the formulae prescribed in this clause.

However, price adjustment as provided under this clause shall **NOT** be applicable to this Contract and it shall be assumed that the tender price shall have taken into consideration any rise or fall in the cost of labour, Equipment, plant, materials and other inputs to the works during this period.

SUB-CLAUSE 70.2 - OTHER CHANGES IN COST

To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.

SUB-CLAUSE 70.3 - ADJUSTMENT AFTER COMPLETION

If the Contractor fails to complete the Works within the time for completion prescribed under Clause 43, the rates applicable at the time of tender shall be deemed to apply even if the Contractor is awarded any extension of time as provided under clause 44 of the Contract.

SUB-CLAUSE 70.4 - SUBSEQUENT LEGISLATION

If, after the date 28 days prior to the latest date for submission of bids for the Contract, there occur in the country in which the Works are being or are to be executed changes to any National or State Statute, Ordinance, Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation, or by-law that causes additional or reduced cost to the Contractor, other than under the preceding sub-clauses of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

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 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 74 - CONTRACT TO BE 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 7: SCHEDULES OF SUPPLEMENTARY INFORMATION

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SCHEDULE 1: CONFIDENTIAL BUSINESS QUESTIONNAIRE

This Confidential Business Questionnaire of the Government of Kenya shall be completed by the Bidder.

REPUBLIC OF KENYA CONFIDENTIAL BUSINESS

QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2(b) or 2(c) Whichever applies to your type of business?

You are advised that it is a serious offence to give false information on this Form.

Part 1 - General:

Business name

..... Location

of business premises

.....

PlotNo.....Street/Road..... Postal

Address.....Tel No. Nature of
business.....

..... Current

Trade Licence No.Expiring date Maximum value of
business which you can handle at any one time:

KShs..... Name of
your bankers.....

Branch..... Are you
an agent of the Kenya National Trading Corporation? YES/NO

Part 2(a) - Sole Proprietor:

Your name in full

.....

Age.....

NationalityCountry of origin.....

*Citizenship details

Part 2(b) - Partnership:

Give details of partners as follows:

Name	Nationality	Citizenship Details*	Shares
1.....	1.....	1.....	1.....
2.....	2.....	2.....	2.....
3.....	3.....	3.....	3.....

Note: Attach proof of citizenship(Compulsory) Part

2(c) – Registered Company

Give details of partners as follows:

Private or Public.....

State the Nominal and Issued Capital of the Company

Nominal Shares (KShs)

Issued Shares (KShs)

.....

.....

Give details of all directors as follows:

Name	Nationality	Citizenship Details*	Shares
1.....
2.....
3.....
4.....
5.....

Note: Attach proof of citizenship (Compulsory)

Part 2 (d) Interest in the Firm:

Are there any person / persons in Kenya Rural Roads who has interest in this firm?

Mark in the box alongside as necessary.

Yes	No

Date:.....Signature of Tenderer.....

SCHEDULE 2: FORM OF WRITTEN POWER OF ATTORNEY

(Attested by notary public)

The Bidder shall state here below the name(s) and address of his representative(s) who is/are authorized to receive on his behalf correspondence in connection with the Bid.

..... (Name of
Bidder's Representative in block letters)

..... (Address of
Bidder's Representative)

..... (Signature of
Bidder's Representative)

Alternate:

..... (Name of
Bidder's Representative in block letters)

..... (Address of
Bidder's Representative)

..... (Signature of
Bidder's Representative)

***To be filled by all Bidders.**

SCHEDULE 3: CERTIFICATE OF BIDDER'S VISIT TO SITE

This is to certify that

[Name/s].....

.....

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

.....

.....

Participated in the organised inspection visit of the site of the works for **REPAIR AND POTHOLE PATCHING OF BONDRO – MISORI ROAD**
held on

.....day of.....20.....

Signed..... (Employer's Representative)

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

.....
(Designation)

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

SCHEDULE 4: KEY PERSONNEL

Note: The Bidder shall list in this schedule the key personnel he will employ from the Contractor's headquarters and from the Contractor's site office to direct and execute the work together with their qualifications, experience, position held and nationality in accordance with Clause 15.2 and 16.3 of the Conditions of Contract Part II. Bidders shall attach signed and certified CVs of all key staff.

Designation	Name	Nationality	SUMMARY OF QUALIFICATIONS AND EXPERIENCE		
			Qualifications	General Experience (Yrs)	Relevant Experience (Yrs)
Headquarters					
Partner/Director or other key staff (give designation)					
Site Office					
Site Agent					
Deputy Site Agent/Site Engineer.					
Senior Foreman					
Construction supervisors					
Site Surveyor					
Other Key Staff					
Foremen					
(i) Earthworks					
(ii) Asphalt Concrete					
(iii) Concrete (iv)					
Pavement					
(v) Drainage					

Note: The Bidder shall list in this schedule the key personnel he will employ from the Contractor's headquarters and from the Contractor's site office to direct and execute the work together with their qualifications, experience, position held and nationality in accordance with Clause 15.2 and 16.3 of the Conditions of Contract Part II (where required, use separate sheets to add extra data for column 4).

Bidders shall attach CV's of key personnel, which should be signed by the staff and certified by a Commissioner of Oaths.

I certify that the above information is correct.

.....
(Signature of Bidder)

.....
(Date)

Format of Resume of Proposed Personnel (use the same)

Bidders shall attach signed and certified CVs of all key staff use the format given below for all other required staff (where required, use separate sheets to add extra data)

Proposed Position			
Personnel information	Name of Personnel		Date of birth
	Professional qualifications		
	Years of Experience		Years with present employer
Present employment	Present Employer's Name:		
	Job Title		
	Name of Contact person (Supervisor)		Telephone No E-mail
From	To	<i>(Summarize professional experience, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project)</i>	
		Company: Project Position Role in project	

Signature of Proposed Staff.....**Date:**.....

Note: Please attach Certified Copies of Qualification Certificates

SCHEDULE 5: SCHEDULE OF THE MAJOR ITEMS OF PLANT TO BE USED ON THE PROPOSED CONTRACT.

The Bidder must indicate the core plant and equipment considered by the company to be necessary for undertaking the project together with proof ownership (*Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder must make available for the Contract.)

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
1	A) General plant 1. Primary/Secondary /Crusher Unit/Power Screen Min capacity 60/hr 2. Concrete batching plant Min Cap 20m3/hr Subtotal for A	Optional Optional			
2	B) Bituminous Plants 1. Bitumen pressure distributor 2. Bitumen heater tank (10,000 litres) 3. Asphalt plant 4. Paver 5. Chip spreader Subtotal for B	1 Optional 0 0 1 <u>2</u>			
3	C) Compactors 1. Vibrating compaction plate 300mm wide 2. Vibrating compaction plate 600mm wide Subtotal for C	Optional 1 <u>1</u>			

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
4	D) Mobile Compressors 1. Single tool (1.8m ³ /min) 2. Two tool (2.8 – 7.3 m ³ /min) 3. Four tool (11.3 – 25.3 m ³ /min) 4. Medium rock drill (1.5 m ³ /min) 5. Heavy rock drill (1.5 m ³ /min) Subtotal for D	1 Optional Optional Optional Optional 1			
5	E) Concrete Equipment 1. Mobile concrete mixers 2. Truck mounted mixers 3. Concrete vibrators 4. Continuous pugmill mixer Subtotal for E	1 Optional 1 Optional 2			
6	F) Transport (Tippers, dumpers, water tankers) 1. 4x2 tippers payload 7-12 tonnes 2. 6x4 tippers payload 16-20 tonnes 3. 8x8 tippers payload 16-20 tonnes 4. Articulated trailers (low loaders) 5. Dump trucks 6. Flat bed lorries 7. Water tankers (18,000-20,000 lts capacity) 8. Water tankers (8,000-10,000 lts capacity)	2 4 0 1 2 2 1 1			

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
	Subtotal F	<u>13</u>			
7	G) Earth moving equipment 1. Tractor dozers with dozer attachment (D6-D9) 2. Tracked loaders 3. Wheel loaders 4. Motor scrappers 5. Motor graders (93-205KW) 6. Trench excavators Subtotal G	Optional 1 1 1 2 1 <u>6</u>			
8	H) Diesel Generators 1. Diesel generators (15-200KV _a) Subtotal H	2 <u>2</u>			
9	I) Excavators 1. Hydraulic crawler mounted (7-10 tonnes) – 0.25-0.4m ³ SAE bucket 2. Hydraulic wheel mounted (7-10 tonnes) – 0.25-0.4m ³ SAE bucket 3. Hydraulic wheel mounted (10-16 tonnes) – 0.4-0.6m ³ SAE bucket Subtotal for I	1 1 0 <u>2</u>			
10	J) Rollers 1. Self-propelled single drum vibrating (various types, 12	1			

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
	tonnes and above)				
	2. Pneumatic rubber tyre (1-2 tonnes/wheel)	1			
	3. Sheep foot roller	1			
	4. Double drum vibrating pedestrian roller	1			
	Subtotal for J	<u>4</u>			
11	K) Stabilization				
	1. Pulvimixer				
	Subtotal for K				

We hereby certify that notwithstanding the list of plant detailed above, we will provide sufficient, suitable and adequate plant in good working order for the successful completion of works

.....
(Signature of Contractor)

.....
(Date)

SCHEDULE 6: SCHEDULE OF ROADWORKS CARRIED OUT BY THE BIDDER IN THE LAST FIVE YEARS

DESCRIPTION OF WORKS	NAME AND ADDRESS OF CLIENT/ EMPLOYER	CONTRACT SUM (KSHS) *	YEAR STARTED	YEAR COMPLETED
<u>A) Non-completed Works</u>				
<u>B) Completed Works</u>				
<u>C) Specific Construction Experience</u>				

I certify that the above works were successfully carried out by me (the bidder). ***Attach Completion Certificates /Substantial completion certificate***

.....
(Signature of Bidder)

.....
(Date)

*Value in KShs using Central Bank of Kenya mean exchange rate at a reference date 7 days before date of BID opening.

SCHEDULE 7: SCHEDULE OF ONGOING PROJECTS

DESCRIPTION OF WORKS	NAME AND ADDRESS OF CLIENT	DATE OF COMMENCEMENT	DATE OF COMPLETION	VALUE OF CONTRACT SUM (KSHS)	VALUE COMPLETED UP TO DATE %	PHYSICALLY COMPLETED UP TO DATE %

I certify that the above works are being carried out by me and that the above information is correct.

.....
(Signature of Bidder)

.....
(Date)

SCHEDULE 8: SHEDULE OF BASIC RATES OF MATERIALS

This schedule has been omitted in view of the provisions of Clause 70, Conditions of Contract Part II (Conditions of Particular Application) given in Section 6B of this document.

SCHEDULE 9: SCHEDULE OF LOCAL LABOUR BASIC RATES

(Ref: Conditions of Contract Part II, Clause 70)

This schedule has been omitted in view of the provisions of clause 70 of Condition of Contract part II (Condition of Particular Application) given in section 8 B of this document.

NOTE: Categories to be generally in accordance with those used by the Kenya Building Construction Engineering and Allied Trade Workers Union.

SCHEDULE 10: FINANCIAL STANDING

- 1 Submit copies of audited profit and loss statements and balance sheet for the last five calendar years and estimated projection for the next two years with certified English translation where appropriate.
- 2 Give turnover figures for each of the last three (3) financial years. Quote in millions and decimal thereof.

	Year 2016	Year 2017	Year 2018
	KShs.	KShs.	KShs.
Road works			
Other civil Engineering works			
Other (specify)			
Total			

SUMMARY OF ASSETS AND LIABILITIES OF THE AUDITED FINANCIAL STATEMENTS OF THE LAST THREE (3) FINANCIAL YEARS

	Year 2016	Year 2017	Year 2018
	KShs.	KShs.	KShs.
1. Total Assets			
2. Current Assets			
3. Bank Credit Line Value			
4. Total Liabilities			
5. Current Liabilities			
6. Net Worth (1-4)			
7. Working capital (2+3-5)			

(a) Name/Address of Commercial Bank providing credit line

.....

..... (b) Total

amount of credit line KShs.....

Attach certified copies of financial bank statements of the last three years. Attach a certified copy of Undertaking of the Bank to providing the credit.

SCHEDULE 11: OTHER SUPPLEMENTARY INFORMATION

1. Financial reports for the last three years, balance sheets, profit and loss statements, auditors' reports etc. List them below and attach copies.

.....

.....

.....

.....

2. Evidence of access to financial resources to meet the qualification requirements. Cash in hand, lines of credit etc. List below and attach copies of supporting documents

.....

.....

.....

.....

3. Name, address, telephone, telex, fax numbers of the Bidders Bankers who may provide reference if contacted by the Contracting Authority.

.....

.....

.....

4. Information on current litigation in which the Bidder is involved.

OTHER PARTY (IES)	CAUSE OF DISPUTE	AMOUNT INVOLVED (KSHS)

I certify that the above information is correct.

.....

..... Date
Signature of Bidder

SCHEDULE 12: WORK METHODOLOGY

Give a brief description of how you plan to carry out the works including traffic management, quality assurance of works and any designs to be carried out by the Bidder within the contract period, in not less than five (5) pages and not more than fifteen (15) pages.

The Works execution programme should include all relevant information to the project. The information given should be clear, not flawed description and compliance to standard and special specification.

Note Works Execution programme is different from form “programme of works referred in FIDIC and Standard Specification for Roads and Bridge Construction. The said “programme of works” is but part of Works Execution Programme (WEP).

The Contents of Works Execution Programme shall include:

i. General information a)

Project data

- Project name,
- financier,
- employer,
- implementing agency
- contract period,
- date of completion,
- defects liability period,
- date of submission of works execution programme,

b) Scopes of works

A brief description of the project which includes major work items.

ii. Mobilization Management Plan

- The Plan should show, the location of site office and site organization chart,
- Personnel management plan (Head Office and Site Office staff)
Deployment plan and schedule of key personnel together with their qualification, and experience statements are shown in WEP. The information in this part includes; name, address, ID, phone number, assigned work types, Subcontractor's information and wage payment plan are also to be included if necessary.
- Equipment management plan
List of the equipment's: Name, type, manufacturer, usage, number, schedule. The bidder shall prepare the maintenance and repair plan for all the equipment.

iii. Work execution schedule

- a) Signed Programme of works
 - b) Signed cash flow plan during the contract period
- It is desirable that work execution schedule includes time frame of each activity such as in bar chart format.

iv. Quality and Quantity Management

- Method statement
This includes Work procedures, order and methods for execution.
- Proposal on material testing.
Material and structural test methods, test laboratory, test frequency, standard values. The relevant clause on quality in SSRBC should also be incorporated.

- ▮ Proposal on measurements

- ▮ Photograph plan

The bidder shall provide a photograph plan to record the progress and proof of quality control, measurement and any event that may arise. Type of works, filming item description, filming frequency and filming location mapping should be incorporated in the plan.

v. Safety management plan

This includes but not limited compliance with safety rules and regulation, traffic control and detour plans, emergency contact list

For quick actions during emergency, emergency contact list should be in WEP and shared with staff in the Authority.

vi. Environmental and social management plan

When the negative impacts on third parties during the execution are predicted, the management and mitigation plans should be included in WEP. For example, if earthwork likely cause dust problem around the working site, the contractor needs to make a plan for water spraying; how often and what time water is sprayed, how many water-spraying vehicles are mobilized, and how many workers are assigned. The following issues are also necessary to be considered in the plan.

- ▮ Soil erosion on slopes and sedimentation deposition on the drainage works.
- ▮ Preservation of trees and shrubbery
- ▮ Entrance and accidental spillage of solid matters, debris, pollutants and waste into water sources.
- ▮ Disposal of waste material
- ▮ HIV prevention.

Note:

Works Execution Programme to be submitted by the bidder shall not be less than five (5) pages covering all the above stated items.

SECTION 8: FORM OF AGREEMENT

SECTION 8: FORM OF AGREEMENT

THIS AGREEMENT is made on the day of 20 between the Kenya Rural Roads Authority of P. O. Box 48151 - 00100, Nairobi, Kenya hereinafter called "the Employer" of the one part and

..... hereinafter called "the Contractor" of the other part.

WHEREAS the Employer is desirous that certain works should be executed, viz.

REPAIR AND POTHOLE PATCHING OF BONDO - MISORI ROAD and has accepted a Bid by the Contractor for the execution completion and maintenance of such works **NOW THIS AGREEMENT**

WITNESSETH as follows:

In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

The following document shall be deemed to form and be read and construed as part of this Agreement, viz.:

- The said BID dated
- The Conditions of Contract Part II
- The Conditions of Contract Part I
- The Standard and Special Specifications
- The Priced Bill of Quantities
- The Letter of Acceptance
- Schedules of Supplementary Information
- The Drawings
- Schedules of Supplementary Information
- The Priced Bill of Quantities
- Other documents as may be agreed and listed

All aforesaid documents are hereinafter referred to as "The Contract".

In consideration of the payment to be made by the Employer to the Contractor, the Contractor hereby covenants with the Employer to execute, complete and maintain the works in conformity in all respects with the provisions of the Contract.

The Employer hereby covenants to pay the Contractor in consideration of the execution, completion and maintenance of the works the Contract Price at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused their respective common seals to be hereto affixed (or have hereunto set their respective hands and seals) on the day and year first above written.

SIGNED AND DELIVERED

By the said Employer: (Director
General, Kenya Rural Roads Authority)
For and on behalf of the said Employer.

In the presence of: (Name and
Designation of Witness)

..... (Signature
of Witness)

..... (Address of
witness)

By the said Contractor: In the

presence of:
(Name and Designation of Witness)

..... (Signature
of Witness)

..... (Address of
witness)

**SECTION 9: FORMS OF PERFORMANCE BID SECURITY AND ADVANCE PAYMENT
GUARANTEE (UNCONDITIONAL)**

PERFORMANCE BANK GUARANTEE

To
Director General,
Kenya Rural Roads Authority,
P.O. Box 48151 - 00100,
NAIROBI.

WHEREAS(hereinafter called "the Contractor") has undertaken in pursuance of Contract NoDatedto execute the **REPAIR AND POTHOLE PATCHING OF BONDO -MISORI ROAD**

(hereinafter called the "Contract")

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bid Security by a recognized bank for the sum specified in the Appendix to Form of Bid as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of

KShs.....(amount in figures)

KShs.....

.....(amount in words)

and we undertake to payment to you, upon your first written demand and without cavil or argument, any sum or sums within and up to the limits as aforesaid without your needing to prove or show grounds or reasons for the sum specified therein.

We hereby waive the necessity of you demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract Documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee and we hereby waive notice of any such change, addition or modification

This Guarantee shall be valid until 28 days after issuing of the Taking Over Certificate.

SIGNATURE AND SEAL OF BANK..... Name of

Signatory..... Name of

bank.....

Address.....Date

ADVANCE PAYMENT GUARANTEE

To: The Director General,
Kenya Rural Roads Authority,
P.O. Box 48151 - 00100,
NAIROBI.

for **REPAIR AND POTHOLE PATCHING OF BONDO – MISORI ROAD**

Dear Sir,

In accordance with the provision of the Conditions of Contract, sub clause 60.12 ("Advance

Payment") of the above – mentioned contract

..... (hereinafter called the "Contractor") shall deposit with the Director General, Kenya Rural Roads Authority a Bid Security to guarantee his proper and faithful performance under the said Clause of the contract in an amount equal to ten (10) % of the contract price, i.e.

KShs.....(amount in figures)

KShs.....

.....(amount in words)

We, (The Bank)..... as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to the Director General, Kenya Rural Roads Authority on his first demand without whatsoever right of objection on our part and without his first claim to the contractor, in the amount not exceeding,

KShs..... (Amount in figures)

KShs.....

.....(Amount in words)

in the event that the obligations expressed in the said clause of the above mentioned contract have not been fulfilled by the Contractor giving right of claim to the Employer for recovery of the whole or part of the advance payment from the Contractor under the contract.

We further agree that no additional to or other modification of the terms of the Contract or of the Works to be performed there under or of the Contract documents which may be made between the Director General, Kenya Rural Roads Authority, P.O. Box 48151-00100 Nairobi- Kenya and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any change or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the contract until the Director General, Kenya Rural Roads Authority, P. O. Box 48151 – 00100 Nairobi – Kenya receives full payment of the same amount from the Contractor.

This guarantee shall be reduced pro rata with the deductions from the down payment made on the Interim Certificates in Accordance with Sub – Clause 60.2 of the Conditions of Contract.

Any dispute over the interpretation of the conditions of this letter of Guarantee shall be subject to the Laws of the Republic of Kenya.

After expiry, this document shall be returned to us for cancellation.

SIGNATURE AND SEAL OF BANK:

.....

Name of
Signatory..... Name of

bank.....

Address.....Date.....

SECTION 10: STANDARD SPECIFICATIONS

SECTION 10: STANDARD SPECIFICATIONS

The Standard Specifications referred to in this document is the *Standard Specifications for Road and Bridge Construction, 1986 Edition* published by the Ministry of Transport and Communications, This document shall form part of the Contract

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

SECTION 11: SPECIAL SPECIFICATIONS

SECTION 11: SPECIAL SPECIFICATIONS

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SECTION 1 – GENERAL SPECIAL

SPECIFICATIONS.

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

101 LOCATION AND EXTENT OF CONTRACT

The project is located in Siaya County. The project road starts at Kipasi to Misori through Amoyo and Nyabera, Kona kawaka – Mituri and Manywanda –Masala. The length of the road is approximately 33.6 Kilometers.

The site of the works shall be the area within the road reserve and any other places as may be designated by the Engineer. The works involve Repair and pothole patching of the project road, junctions, accesses to public institutions and any other works as shall be directed by the Engineer.

102 EXTENT OF CONTRACT.

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

- 1.Preliminary and General Items
- 2.Site clearance,
- 3.Shoulder grading and repair,
- 4.Base repair as directed by the Engineer,
5. Single Seal Surface Dressing with 10/14mm pre-coated chippings and 80/100 Straight run penetration grade bitumen as binder.
- 6.Maintenance of passage of traffic through and around the works
- 7.Maintenance of works during construction and the defects liability period shall be 12 months.

104 PROGRAMME OF EXECUTION OF THE WORKS

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

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

The Contractor shall carry out the contract in accordance with the programme agreed with the Engineer, but he shall in no manner be relieved by the Engineer's approval of the programme, of his obligation to complete the works in the prescribed order and by

the prescribed completion date and he shall from time to time review his progress and make such amendments to his rate of execution of the works as may be necessary to fulfil his obligations.

105 ORDER OF EXECUTION OF WORKS

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

107 TAKING OVER CERTIFICATE

The minimum length of the road for which a certificate will be issued is the whole length of the project road when substantially completed.

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

- a) At the commencement of the contract the Contractor will submit in writing to the Engineer, the hours which shall be considered normal working hours, together with the day of the week to be set aside for rest. When approved these shall be maintained throughout the continuance of the Contract.
- b) Notwithstanding the provision of the last paragraph of clause 108 of the Standard Specification, the Engineer's Representative normal working hours shall be 8 hours from Monday to Friday and 5 hours on Saturday with Sunday set aside for rest.
If the Contractor wishes to execute permanent works outside these hours, he shall meet any extra costs arising thereof in addition to giving a day's notice in writing.

109 NOTICE OF OPERATIONS

Add the following sub- Clause.

Notification Terms

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

Explosive and Blasting

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

117 HEALTH, SAFETY AND ACCIDENTS

Add the following:

In addition to providing, equipping and maintaining adequate first aid stations throughout the works in accordance with the laws of Kenya, the contractor shall provide and maintain on site during the duration of the Contract, a fully equipped dispensary. This shall be with a qualified Clinical Officer / Nurse who shall offer the necessary medical advice on HIV and related diseases to the Engineer's and Contractor's Site staff. The Contractor shall allow for this in the rates and be responsible for all site welfare arrangements at his own cost.

119 USE OF EXPLOSIVES

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

120 PROTECTION OF EXISTING WORKS

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

The Contractor's attention is drawn to the fact that it is essential to maintain existing power, telephone, water, sewage and other services throughout the Contract Period.

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

121 DIVERSION OF SERVICES

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

If it should become necessary, for the proper execution of the work, temporary, to remove or divert any existing pipe, cable, drain or other service, the Contractor shall obtain permission from the competent authority or owner for removal or diversion to be effected. The Contractor shall carry out all necessary work in such a manner and at such times as may be approved by such authority or owner. The cost of all removal, diversion and reinstatement and all things connected therewith shall be paid for by the Contracting Authority through the Construction Contract.

If in the opinion of the Supervisor or of the competent authority or owner, it should become necessary permanently to remove or realign any existing pipe, cable or other service, the Contractor shall obtain permission from the competent authority or owner for the removal or realignment to be effected. The Contractor shall carry out all necessary work in such a manner and at such times as may be approved by such authority or owner and the completed work shall be to the satisfaction of such authority or owner. The cost of all permanent removal and realignment and all things connected therewith shall be paid for by the Contracting Authority through the Construction Contract.

Any of the work involving repair, replacement of existing pipes, cables or other services shall be carried out by the competent authority or owners if they so desire, in which case the Contractor shall allow them the facilities and assistance they may require and shall pay the full expense of such work and all things connected therewith in the first instance, but the cost shall be paid for by the Contracting Authority through the Construction Contract.

The Contractor shall allow in his rates for the programming of his work to allow for the necessary diversion of any services.

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

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

123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS

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

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

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

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

126 MATERIAL AND MANUFACTURED ARTICLES

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

128 STORAGE OF MATERIALS

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

129 TEST CERTIFICATES

When instructed by the Engineer the Contractor shall submit certificates of test from the suppliers of materials and goods required in connection with the works as the Engineer may require. Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the specifications and shall give the results of all the tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

131 SIGNBOARDS

The Contractor shall provide and erect three (3) publicity signboards on the site as directed. The Engineer shall, as shown in the Drawings, direct the minimum dimensions of the boards. The boards shall be prepared, primed and painted cream and lettered in black. The boards shall be of stout construction, resistant to the effects of weather.

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

132.1 HOUSING AND ACCOMMODATION FOR THE ENGINEER'S SENIOR STAFF

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

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

Payment shall be as per the bills of quantities.

132.4 HOUSING ACCOMMODATION FOR ENGINEER'S JUNIOR STAFF

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

132.7 ENGINEER'S OFFICE, FURNITURE AND EQUIPMENT

The Contractor shall provide a furnished and equipped main office of plan area not smaller than 155 metre squares that is equivalent of the MOR Standard Resident Engineer's Office. This office shall be of weather-proof construction, provided with mosquito proof and burglar-proof windows and lockable doors and suitably insulated against heat and cold, all to the satisfaction of the Engineer. The room to be occupied by the Engineer's Representative and its front office shall be provided with a floor carpet to

be approved by the Engineer. All other floors shall be given a PVC tile finish using approved adhesive including 150mm wood skirting or superior finish. The windows shall be fitted with curtains and blinders.

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

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

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

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

132.8 ENGINEER'S LABORATORY AND SURVEY EQUIPMENT

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF

The Contractor shall pay wages (including all overtime) and house all attendant staff to fulfil the requirements of Clause 137 of the Standard Specification. The number of staff required for these duties shall be a minimum but not limited to 1 (One) No. secretary, 2 (Two) No. Office attendants, 5 (Five) No. Graded artisans, 4 (Four) No. chainmen, 4 (four) No. Lab attendants.

The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under appropriate items in the Bills of Quantities.

139 RECEIPTED ACCOUNTS

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

140 PAYMENT OF OVERTIME FOR ENGINEER'S JUNIOR STAFF

Delete this clause entirely and substitute with:

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

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

at his own costs.

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

141 MEASUREMENT AND PAYMENT

Contrary to provisions of Standard Specifications, payment for Item (b) & (c) shall be per month for the contract period and any approved extensions. Any period beyond the contract period shall be borne by the contractor.

142 LIQUIDATED DAMAGES

Liquidated Damages at the rate of KShs. 10,000/- per day shall apply in the event of the work not being completed within the time for completion plus any extension of time which may be determined by the Engineer.

143 ENVIRONMENTAL PROTECTION

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

(a) After extraction of materials, all borrows pits shall be backfilled to the satisfaction of the Engineer. In particular borrow pits near the project road shall be backfilled in such a way that no water collects in them.

(b) Spilling of bitumen fuels Oils and other pollutants shall be cleared up. The

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

Payment will be under appropriate items in the BOQ.

144: Mobilisation and Establishment of Site

The Contractor shall provide all equipment, tools, material and temporary stores required to carry out the required Works.

The Contractor shall ensure that all possible means of protection are given to the staff at all times. Such protection shall include provision of high visibility clothing or vests for the workforce, in potentially dangerous locations. The Contractor shall also maintain first aid kits with items included on the advice of the local Medical Officer, or as directed by the Engineer.

Measurement and Payment

No separate payment shall be made for this item. The Contractor shall include the costs in the other rates for other measured items.

145 Clearance on Completion

On Completion of the Works, all temporary stores, equipment, signs and tools shall be removed from the site, and the Site left in good order to the satisfaction of the Engineer.

Measurement and Payment

The Contractor shall provide and erect two sign boards, one at each end of the proposed works and as instructed by the Engineer. Additional signs shall be erected at appropriate locations along the project route as directed by the Engineer. The signboards shall comply with the requirements and details 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.

Work Method

The Contractor shall use **Labour** to carry out this item of work

Quality Control

The Engineer shall check regularly that traffic control measures are satisfactory.

Measurement and Payment

A Lump Sum shall be paid on a Monthly basis upon the approval of the Engineer that adequate Traffic Control is in place

SECTION 2- MATERIALS AND TESTING OF MATERIALS

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

SECTION 04: ROADSIDE CLEARANCE

Scope

This section covers all routine maintenance works within the road reserve and includes items such as bush clearing, pruning of tree branches, grass cutting, and removal of litter and any other debris.

402:Grass Cutting (Manual)

Grass shall be defined as any form of plant growth including small shrubs having a girth of not more than 100mm measured at height of 200mm above ground level.

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

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

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

Work Method

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

Quality Control

The road width for grass cutting shall be measured at 50-m intervals and shall be free of grass after the operation.

Measurement: m²

The measurement shall be area of grass cut, based on the standard width and measured length of clearing.

Payment

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

403 Bush Clearing - heavy

404 Bush Clearing - light

405 Pruning Tree Branches

Special Specifications

This activity involves the removal of small trees, shrubs and bushes all including their root systems. In addition, the Engineer may order the trimming of branches of large trees to improve visibility. The area within the road reserve including sides of existing embankments and cuttings shall be cleared as instructed 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 cut material shall be collected into heaps away from the side drains and where it shall not block or interfere with visibility.

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

Work Method

The Contractor shall use **Labour** to carry out this item of work

Quality Control

The width for bush clearing shall be measured at 50-m intervals and shall be free of trees or bushes.

Measurement Unit: m²

The measurement shall be the area cleared according to the specified widths and measured length of clearance.

Payment

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

408: Clearing of Obstructions

This activity shall involve the following tasks:-

Inspection of the road section(s) regularly.

Removal of all obstructions such as fallen trees/ branches, rock fall, landslides and broken signs away from the road, side drains, mitre drains and other drains, inlets and outlets of drifts, culverts and other structures and the safe disposal thereof outside the road formation width.

Removal of dead animals' carcasses away from the carriageway and disposing of them as directed by the Engineer. Liaison with the Police may be necessary.

Work Method

The Contractor shall use **Labour** to carry out this item of work

Quality Control

The road section shall be free of any obstruction.

Measurement Unit: Provisional Sum

The measurement for this item shall be a Provisional Sum paid as necessary on a Dayworks basis.

Payment

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

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

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

The Contractor will be entirely responsible for locating and proving suitable sources of material complying with the Standard and Special Specifications and for procurement, winning, haulage to site of these materials, rehabilitating the borrow pits, quarries, stock pile and spoil areas and all costs involved therein. Similarly, the Contractor will be responsible for provision of areas for stockpiling materials and disposal of spoil, as well as the costs thereof. Should there be suitable areas for spoil dumps or stockpiling within the road reserve, the Contractor may utilise them, subject to approval of the Engineer. No additional payment will be made to the Contractor to cover costs arising from the requirements of this section. The Contractor shall include the costs of complying with this section in the rates.

SECTION 9: PASSGE OF TRAFFIC

904: Traffic Control

The Contractor shall provide warning signs, fences, and barriers, detours, which shall be properly positioned in advance of the works to ensure that traffic is well and safely accommodated for the duration of the Works.

Traffic signs and other traffic control facilities shall be kept in good condition and located in positions where they are visible to road users.

The Contractor is directly responsible for the safety of the workers and the road users. Whenever work is being carried out on or close to the carriageway, adequate measures must have to be taken to warn and protect both road users and workers.

Where a diversion has been provided: After the construction of the diversion has been completed and before work starts, warning signs, barriers and cones must be placed around the work area.

Where no diversion has been provided and the works are supposed to be carried out on one side of the road at the same time allowing traffic to pass on the other;

Before work starts, warning signs, barriers and cones must be placed around the work area.

The Engineer shall check regularly that traffic control measures are satisfactory.

909: Assistance to Public

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

Measurement and Payment

Measurement Unit: (Month)

SECTION 11: SHOULDER MAINTENANCE AND REPAIR

1101: Shoulder Grading

Where directed by the Engineer the Contractor shall reinstate or re-form the shoulders of the road using either a Towed or Motor grader.

Pegs 400 to 500mm long shall be placed at 10 to 20 m intervals on the edge of the carriageway. Suitable material from the front slope of the side drain shall be bladed and spread on the shoulders (and, if appropriate the carriageway), unless otherwise directed by the Engineer, and the shoulders re-formed to the cross-section dimensions. Compaction shall be achieved with the wheels of the equipment used, or by other approved means.

Work Method

The Contractor shall use Equipment to carry out this item.

Measurement Unit: km

The measurement shall be the length of shoulder reformed.

Payment

The unit rate shall be the full compensation for labour, tools, equipment and incidental costs required for carrying out the work.

SECTION 12 - NATURAL MATERIAL SUBBASE AND BASE

1201 GENERAL

Where instructed by the Engineer, the Contractor shall undertake repairs, widening and reprocessing to the existing carriageway and shoulders in accordance with sections 12 and 14 of the Special Specifications.

a) Areas to be scarified and reprocessed

The contractor will scarify, add new material and reprocess sections as determined by the Engineer.

b) Pavement repairs

The Contractor will carry out repairs to base and subbase as directed by the Engineer and according to Specifications given in Sections 12 and 14 of the Standard Specifications.

c) Pavement widening

The Contractor shall, as directed by the Engineer, bench and compact the subgrade to 100% MDD (AASHTO T99), provide lay and compact material for subbase and base as directed by the Engineer and in accordance with Sections 5 and 12 of the Standard Specifications.

1203 MATERIAL REQUIREMENTS

Natural materials for base and subbase 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 subbase.

1209 MEASUREMENT AND PAYMENT

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

1211 REPROCESSING EXISTING PAVEMENT LAYERS

a) General

The existing surfacing and the base shall be reprocessed with additional material and the composite mixture shall be stabilized with 2 – 4 % cement as instructed by the Engineer to have CBR \geq 160%

Before commencement of the work the Contractor shall propose plants and equipments he proposes to use for this activity.

The Contractor after approval of his proposal shall carry out test section in accordance with Section 3 of the Standard Specifications.

b) The existing surfacing and base course shall be broken up to specified depth and reprocessed in place, where required. The underlying layers shall not be

damaged, and material from one layer may normally not be mixed with that of another layer. Where unauthorized mixing occurs or where the material is contaminated in any way by the actions of the Contractor, and the contaminated material does not meet the specified requirements of for the particular layer, he shall remove such material and replace it with other approved material, all at his own expense.

c) Any mixture composition of the new layer must not contain more than 30% of the bituminous material by volume. The mixture must not contain pieces of bound bituminous material larger than 37.5mm, and any such material shall be removed at the Contractor's cost.

d) The requirements for imported material used in the respective pavement layers shall comply with the limitations, norms, sizes and strengths specified in the Standard Specifications clause 1203(b) and (d) and shall be worked as per Section 14 of the Standard Specification.

e) Material reworked in-situ or that obtained from existing pavement is not expected to comply with the material requirements but the reworking should achieve the specified requirements.

f) Where the thickness of any existing pavement layer requires to be supplemented within reprocessing and the thickness of the additional material after compaction will be less than 100mm, the existing layer shall be scarified to a depth that will give a layer thickness of at least 100mm after compacting the loosened existing and the additional material.

Controlling the Reworked Depth

The Contractor shall submit a proven method to method to control the depth of excavation, or layer to be reworked, to the Engineer for approval. The Engineer may order a trial section to be reprocessed before any major length of the road is rehabilitated.

Excavations

(i) Excavations in the pavement shall be kept dry. In the event of water penetrating the underlying layers, construction of the consecutive layers shall be postponed until the underlying layers are dry enough to accommodate the construction plant without deforming or otherwise showing distress.

(ii) Step construction shall be carried out per layer at the joint when excavating, both longitudinally (if appropriate) and perpendicular to the direction of travel. The step width shall be 500mm perpendicular to the direction of travel, and 150mm long longitudinally, unless otherwise instructed by the Engineer.

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

Measurement and Payment

(a) Item: In-situ reprocessing of existing pavement layers as base/subbase compacted to specified density (95% MDD AASHTO T180) and thickness.

Unit: m³

The tendered rate shall include full compensation for breaking up the existing pavement layer to specified depth, breaking down and preparing the material and the spreading and mixing in of any additional material

(b) Item: The addition of extra gravel to subbase and base.

Unit: m³

The tendered rate shall include full compensation for procuring and addition of the material to the in-situ scarified layers and the transportation of the material over a free-haul distance of 1Km. The tendered rates will also include full compensation for prospecting for materials and any payments necessary to acquire the specified quality material.

(c) Item: Excavation of existing bituminous pavement materials including free-haul up-to 1Km.

Unit: m3

The tendered rates shall include full compensation for excavating the existing bituminous material from the pavement layers and for loading, transporting the material for a free-haul of 1 Km, off-loading and disposing of the materials as specified.

(d)Item:Excavation of the existing pavement

Unit: m3

The tendered rate shall include full compensation for excavating the existing material from the pavement layers and for loading, transporting the material for a free-haul distance of 1 Km, off-loading and disposing of the material as specified.

Payment will only be made for breaking up and excavating existing pavement layers to the specified depth if the material is to be removed to spoil.

SECTION 14- CEMENT TREATED MATERIALS

1401 CEMENT TREATMENT

i) Cement

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

ii) Moisture content

The moisture content of the stabilised material shall be as directed by the Engineer but nevertheless within the range of 85% to 105% of the Optimum Moisture Content (AASHTO T180).

iii) Mixing and Placing

The material to be stabilised and the cement shall be mixed by an approved mixing plant for material to be used for pavement construction, widening and shoulders.

1403 LIME TREATMENT

Lime treatment will be as outlined in the Standard Specifications for road and bridge construction. The lime content of the stabilised material shall be as indicated by the Engineer and will normally be about 2-4%.

1409 PROTECTION AND CURING

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

1412 MEASUREMENT AND PAYMENT

1510: Stabilised Gravel

“Stabilised Gravel “ includes lateritic gravel, quartzitic gravel, calcareous gravel, soft stone, coral rag, clayey sands, decomposed rock, crushed rock or a combination of any of these materials and treated with lime or cement.

Work method

The Contractor shall use **Labour** and **Equipment** to carry out this item of work

Quality Control

The repair shall be carried out to the approval of the Engineer.

The repair shall be checked with a straight edge and shall be flush with other parts of the carriageway laterally and longitudinally.

Compaction of the patch shall be checked such that no imprint of the compaction equipment shall be visible.

Measurement Unit: m³

The measurement shall be the volume of gravel and treatment material (cement or lime) mixed and compacted on the road measured in-situ.

Payment

The unit rate for this item shall include the full compensation for the preparation of the pothole, materials used, labour, tools, equipment, and incidental costs required to carry out the work.

Curing treated material

Curing treated material shall be measured by the square metre of the layer cured calculated as the product of the specified width of treated layer and the length cured.

SECTION 15 - BITUMINOUS SURFACE TREATMENTS

PART A - GENERAL

1501A GENERAL

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

a) Chippings

10/14mm size pre-coated chippings at a spread rate of 60 - 90 m²/m³ or as directed by the Engineer.

b) Bitumen Spray Rates

- 1.0 – 1.4l/m² for the seal or as directed by the Engineer.

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

PART B - PRIME COAT AND TACK COAT

1502B MATERIALS FOR PRIME COAT AND TACK COAT.

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

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

Prime coat shall be applied to gravel areas that are to receive double seal surface dressing or bituminous mixes as directed by the Engineer.

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

The rates of spray of the binder shall be as instructed by the Engineer and shall generally be within the range 0.5-1.2 litres/square metre.

1503B PREPARATION OF SURFACE

In addition to requirements of Clause 1503B of the Standard Specifications, the Contractor shall prepare and repair cracks, edges, potholes and other failures as follows:

- Where instructed, the Contractor shall prepare areas for the repair of potholes, road edges and other repair areas by excavating off unsuitable or failed material and debris, trimming off excavated edges, cleaning and compacting the resulting surfaces and applying MC 30 cut-back bitumen prime coat and bitumen emulsion KI-60 tack coat, all as directed by the Engineer.

Measurement and payment shall be made under the relevant item of Bill No 15.

- Where the surface repair on potholes and edges are to be carried out, Asphalt Concrete Type II (0/20 gradation) shall be used. Bituminous material for repair

of failures and other repair areas shall be paid for under the relevant item of Bill No 16.

PART C – SURFACE DRESSING

1502C MATERIALS FOR SURFACE DRESSING MATERIALS FOR SURFACE DRESSING.

a) Binder

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

b) Chippings

Chippings shall be of Class 1 material and shall comply in all respects with clause 1502C of the Standard Specification. The Contractor's attention is drawn to the requirements of Clause 1501C of the Standard Specification with regard to cleanliness and the dust content of chippings for surface dressing. Should it prove necessary in the Engineer's opinion to wash chippings, no extra payment will be made to the contractor for this operation.

1503C SPRAY AND SPREAD RATES OF BITUMEN AND CHIPPINGS.

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

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

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

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

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

1505C PRE-COATED CHIPPINGS

Chippings utilized for surface dressing works under this contract shall be pre-coated in accordance with clause 1505C of the Standard Specification. The binder used for pre-coating chippings shall be MC 30 cut-back bitumen.

The amount of bituminous binder used to pre-coat chippings will be as instructed by the Engineer and will normally be between 0.4% and 1.0% residual bitumen as percentage of the total dry weight.

Prior to laying any pre-coated chippings the Contractor shall prepare trial mixes of bitumen and chippings in the presence of the Engineer. After completion of trial mixes the Engineer shall issue written instructions to the Contractor indicating the amount of binder to be added in pre-coated chippings. The Contractor shall maintain this proportion unless the surface or nature of the chippings changes when the Contractor shall repeat the trials and the Engineer will issue revised instruction.

1511C MEASUREMENT AND PAYMENT

(a) Seal coat

Seal coats shall be measured by the litre, for each type of bituminous binder for each seal coat, calculated as the product of the area in square metres sprayed and the rate of application in litres/square metres, corrected to 15.6 o C.

(b) Chippings

Chippings shall be measured by the cubic metre of each nominal size for each class calculated as the product of the area in square metres covered and the reciprocal of the instructed rate of application in square metres/cubic metre or the actual rate of application in square metres/cubic metre whichever calculation gives the lower volume.

PART D:PAVED CARRIAGEWAY MAINTENANCE

1501D: Pothole Patching - hot mix

1502D: Pothole Patching - cold mix

This activity involves the repair of potholes, which have developed on the surface of paved roads where there is no evidence of base failure. Potholes shall be defined as local failures usually round or oval in shape covering less than 4.0 sq. m and less than 100mm in depth. Repair of larger areas shall be defined as surface repairs.

The areas to be repaired shall be marked out into rectangular shapes. All failed areas shall be cut back to sound road material. The hole shall extend to the bottom of the base layer, and the sides shall be cut to form a vertical face. All unsuitable material shall be removed and deposited away from the road to the approval of the Engineer.

A prime coat of 60% cationic spray grade emulsion, shall be applied on all the sides and on the bottom of the prepared hole

Premixed bituminous material, similar to the existing surfacing shall be placed in the hole and compacted in two or more layers of regular thickness depending on the depth involved.

The final layer, prior to compaction, shall be overfilled by 20% of its depth. Compaction shall be carried out using a pedestrian vibrating roller, plate compactor or hand rammer as appropriate until the surface is level, with the surrounding material.

A minimum depth of 50mm shall be provided for the cationic premix bituminous backfill.

Premix proportions shall be as follows:

- Sand	38%
- 6.7mm aggregate	57%
- Bitumen emulsion	5% (bitumen content 60-65%)

Work Method

The Contractor shall use **Labour** and **Equipment** to carry out this item.

Quality Control

The quality of the repair material shall be to the approval of the Engineer.
The patch shall be checked using a straight edge and shall be flush with other parts of the carriageway
Compaction of the patch shall be checked such that no imprint of the compaction equipment is visible.

Measurement Unit: m^3

The unit of measurement shall be the volume of material used in the repair.

Payment

The unit rate for this item shall include the full compensation, labour, tools, materials, equipment and incidental costs required to carry out the work.

1504D: Road Edge Repairs

This activity involves the repair to the edges of paved carriageways, including the rebuilding of pavement layers and the shoulders.

All soft material along the surface edge shall first be removed. The pavement layers shall be rebuilt and thoroughly compacted, in similar materials to the existing pavement. The pavement shall be similarly rebuilt against sound material of the existing pavement, and thoroughly compacted. The top of the compacted fill shall be between 30mm to 50mm below the estimated new surface level.

A trench (100 mm wide x 100mm deep) shall be dug along the surface edge in order to reinforce the new edge. The trench shall be swept clean of all loose material and primed with bitumen emulsion.

A trench shall be filled with cold premix and compacted in layers of a 50mm maximum thickness, finishing flush with the existing surface and maintaining the cross fall. The repaired edge shall be finished off by sheet patching with a light sand layer to absorb surplus bitumen.

Work Method

The Contractor shall use **Labour** and **Equipment** to carry out this item.

Quality Control

The edge repair shall be checked using straight edge to be flush with other parts of the carriageway

Compaction of the edge repair shall be such that no imprint of the compaction equipment is visible.

Measurement Unit: m^2

The measurement shall be the area of the repair including the bituminous edge and shoulder.

Payment

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

1505D : Spot Sealing - (Fine cracks)

This activity involves the repair of alligator cracking (maximum width 3mm) on the carriageway. The area to be sealed shall be marked in chalk and be clean and dry. The bituminous binder shall be as specified by the Engineer and shall be applied with a spray lance or other approved method. Distribution rates shall be 1.5kg/m² for bitumen emulsion. Coarse sand, up to 5mm, shall then be spread over the whole surface.

Crack sealing shall be carried out during the warm and dry weather.

Work Method

The Contractor shall use **Labour** and **Equipment** to carry out this item.

Quality Control

The quality of the repair work shall be to the approval of the Engineer.

The area of spot sealing shall be checked to be free of cracks.

Measurement Unit: m²

The measurement for this item will be the area of fine cracks repaired.

Payment

The unit rate shall include full compensation for materials, labour, tools, equipment, and incidental costs required to carry out the work.

1506D: Crack Sealing

This activity covers the repair of transverse or longitudinal cracks wider than 3mm on the surface of a surface dressed or bituminous carriageway or shoulder.

The cracks and the surrounding road surface shall be clean and dry. The cracks shall be filled with hot cut back bitumen.

The bitumen shall be distributed using a watering can and shall follow the line of the crack, with the nozzle or spout held close to the road surface, keeping the width of the spread as narrow as possible. Coarse sand, up to 5mm, or crusher dust shall be spread over the strip of the binder.

All crack sealing shall be carried out during the warm and dry weather.

Work Method

The Contractor shall use **Labour** and **Equipment** to carry out this item.

Quality Control

The sealing shall be carried out to the satisfaction of the Engineer.

The area of sealing shall be checked to be free of cracks.

Measurement Unit: m

The measurement shall be the length of cracks sealed.

Payment

The unit rate shall include full compensation for materials, labour, tools and incidental costs required to carry out the work.

1507D: Base repairs

This activity involves the repair of localised failures of the pavement layers, including the removal of the deformed areas and reconstructing the pavement and surfacing layers including treatment of the bottom of the excavation prior to backfilling.

The areas to be repaired shall be marked and cut out into rectangular shapes. All failed area shall be cut back to sound road material. The sides shall be dressed so that they are at 60° to the horizontal, and the bottom of the hole shall be compacted to a density of 93 % AASHTO T180. All unsuitable material shall be removed and deposited away from the road as directed by the Engineer.

For a bituminous base a prime coat of 60% cationic spray grade emulsion shall be applied to all vertical surfaces and on the bottom of the prepared hole.

The material for the base repair shall be graded crushed stone, dense bitumen macadam or neat gravel, according to the original base material, and shall be compacted in layers as directed by the Engineer.

1508D: Graded Crushed Stone

“Graded crushed stone” shall be crushed stone with a smooth grading curve, which is within the specified envelope. The stone class shall be given in the special Specifications or as directed by the Engineer.

Work Method

The Contractor shall use **Labour** and **Equipment** to carry out this item of work.

Quality Control

The repair shall be carried out to the approval of the Engineer.

The repair shall be checked with a straight edge and shall be flush with other parts of the carriageway laterally and longitudinally.

Compaction of the patch shall be checked such that no imprint of the compaction equipment is visible.

Measurement Unit m^3

The measurement shall be the volume of graded crushed stone compacted in the repair measured in-site.

Payment

The unit rate for this item shall include the full compensation for the materials, tools, labour, equipment and incidental costs, required to carry out the work.

1509D: Dense Bitumen Macadam

Dense bitumen macadam shall be a hot-mixed, hot-laid plant mixture of well-graded aggregate and penetration grade bitumen, as specified for road-base material.

Work method

The Contractor shall use **Labour** and **Equipment** to carry out this item.

Quality Control

The repair shall be carried out to the approval of the Engineer

The repair shall be checked with a straight edge and shall be flush with other parts of the carriageway laterally and longitudinally.

Compaction of the patch shall be checked such that no imprint of the compaction equipment is visible.

Measurement Unit: m^3

The measurement shall be the volume of dense bitumen macadam compacted on the road measured in- situ.

Payment

The unit rate for this item shall include the full compensation for the materials, tools, labour, equipment, and incidental costs required to carry out the work.

SECTION 16 - BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES

This section covers different types of bituminous mixes for base and surface (wearing and binder courses) and is divided into the following parts: -

Part A: General

Part B: Asphalt Concrete for carriageway and shoulders.

PART A – GENERAL

1601A SCOPE OF PART A

Part A comprises all the general requirements for bituminous mixes, which apply to Part B as well.

1602A REQUIREMENTS FROM OTHER SECTIONS

The following sections of this Specification apply to Part B of this section and shall be read in conjunction therewith:-

Section 2	Materials and Testing of Materials
Section 3	Setting Out and Tolerances
Section 6	Quarries, Borrow Pits, Stockpile and Spoil Areas
Section 15	Bituminous Surface Treatments and Surface Dressing

1603A CONSTRUCTION PLANT

(a) General

The Contractor shall submit to the Engineer in accordance with Section 1 of its Specification, full details of the construction plant he proposes to use and the procedures he proposes to adopt for carrying out the permanent Works.

The Engineer shall have access at all times to construction plant for the purposes of inspection. The Contractor shall carry out regular calibration checks in the presence of the Engineer and shall correct forthwith any faults that are found.

All construction plant used in the mixing, laying and compacting of bituminous mixes shall be of adequate rated capacity, in good working condition, and shall be acceptable to the Engineer. Obsolete or worn-out plant will not be allowed on the work.

(b) Mixing Plant

Bituminous materials shall be mixed in a plant complying with ASTM Designation D995 and shall be located on the Site unless otherwise agreed by the Engineer. It shall be equipped with at least three bins for the storage of heated aggregates and a separate bin for filler. All bins shall be covered to prevent the ingress of moisture.

The plant may be either the batch-mix type or the continuous-mix type and shall be capable of regulating the composition of the mixture to within the tolerances specified in Clause 1614A of this Specification.

The bitumen tank shall be capable of maintaining its contents at the specified temperature within a tolerance of 50C and a fixed thermometer easily read from outside

the tank. Any bitumen that has been heated above 180°C or has suffered carbonisation from prolonged heating shall be removed from the plant and disposed of.

(c) Laying Plant

Bituminous materials shall be laid by a self-propelled spreader finisher equipped with a hopper, delivery augers and a heated adjustable vibrating screed. It shall be capable of laying bituminous materials with no segregation, dragging, burning or other defects and within the specified level and surface regularity tolerance. Delivery augers shall terminate not more than 200mm from the edge plates.

(d) Compaction Plant

The Contractor shall provide sufficient rollers of adequate size and weight to achieve the specified compaction. Prior to commencing the laying of bituminous mixes in the permanent Works the Contractor shall carry out site trials in accordance with Section 2 of this Specification to demonstrate the adequacy of his plant and to determine the optimum method of use and sequence of operation of the rollers.

It is important to achieve as high a density as possible at the time of construction and it is expected that vibrating rollers will be required to produce the best results. However, it is essential that thorough pre-construction trials are carried out to ensure that:-

- ▣ The roller is set up to have the optimum amplitude and frequency of vibration for the particular material being laid
- ▣ That the roller does not cause breakdown of the aggregate particles.
- ▣ That the optimum compaction temperatures are established which allow compaction without causing ripple effects or other distortions of the surfacing.

1604A PREPARATION OF SURFACE

Immediately before placing the bituminous mix in the pavement, the existing surface shall be cleaned of all material and foreign matter with mechanical brooms or by other approved methods. The debris shall be deposited well clear of the surface to be covered.

Any defect of the surface shall be made good and no bituminous mix shall be laid until the Engineer has approved the surface.

A tack coat shall be applied in accordance with Section 15 of this Specification. If the Engineer considers a tack coat is required prior to laying the bituminous mix or between layers of the bituminous mix, due solely to the Contractor's method of working, then such tack coat shall be at the Contractor's expense.

1605A DESIGN AND WORKING MIXES

At least two months prior to commencing work using a bituminous mix, the Contractor shall, having demonstrated that he can produce aggregates meeting the grading requirements of the Specification, submit samples of each constituent of the mix to the Engineer. The Engineer will then carry out laboratory tests in order to decide upon the proportion of each constituent of the initial design mix or mixes to be used for site trials to be carried out in accordance with Clause 1606A of this Specification.

Should the Engineer conclude from the site trials that the mix proportion or aggregate grading are to be changed, the Contractor shall submit further samples of the constituents and carry out further site trials all as directed by the Engineer.

The Engineer may instruct the alteration of the composition of the -75 micron fraction of the aggregates by the addition or substitution of mineral filler. The Engineer may also instruct the alteration of all or part of the - 6.3mm fraction of the aggregates by the addition or substitution of natural sand.

The Contractor shall make the necessary adjustments to his plant to enable the revised mix to be produced.

Following laboratory and site trials the Engineer will determine the proportions of the working mix and the Contractor shall maintain this composition within the tolerances given in Clause 1614A.

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advise the Engineer accordingly. The procedure set out above shall be followed in establishing the new mix design.

1606A SITE TRIALS

Full scale laying and compaction site trials shall be carried out by the Contractor on all asphalt pavement materials proposed for the Works using the construction plant and methods proposed by the Contractor for constructing the Works. The trials shall be carried out with the agreement, and in the presence of the Engineer, at a location approved by the Engineer.

The trials shall be carried out to: -

- a) Test materials, designed in the laboratory, so that a workable mix that satisfies the specification requirements can be selected.
- b) To enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Each trial area shall be at least 100 metres long and to the full construction width and depth for the material. It may form part of the Works provided it complies with this Specification. Any areas that do not comply with this Specification shall be removed.

The Contractor shall allow in his programme for conducting site trials and for carrying out the appropriate tests on them. The trial on any pavement layer shall be undertaken at least 21 days ahead of the Contractor proposing to commence full-scale work on that layer.

The Contractor shall compact each section of trial over the range of compactive effort the Contractor is proposing and the following data shall be recorded for each level of compactive effort at each site trial: -

- i) The composition and grading of the material including the bitumen content and type and grade of bitumen used.
- ii) The moisture content of aggregate in the asphalt plant hot bins.

iii) The temperature of the bitumen and aggregate immediately prior to entering the mixer, the temperature of the mix on discharge from the mixer and the temperature of the mix on commencement of laying, on commencement of compaction and on completion of compaction. The temperature of the mixture is to be measured in accordance with BS 598, Part 3, Appendix A.

iv) The type, size, mass, width of roll, number of wheels, wheel load, tyre pressures, frequency of vibration and the number of passes of the compaction equipment, as appropriate for the type of roller.

v) The target voids and other target properties of the mix together with the results of the laboratory tests on the mix.

vi) The density and voids achieved.

vii) The compacted thickness of the layer.

viii) Any other relevant information as directed by the Engineer.

At least eight sets of tests shall be made by the Contractor and the Engineer on each 100 metres of trial for each level of compactive effort and provided all eight sets of results over the range of compactive effort proposed by the Contractor meet the specified requirements for the material then the site trial shall be deemed successful. The above data recorded in the trial shall become the agreed basis on which the particular material shall be provided and processed to achieve the specified requirements.

1607A MIXING OF AGGREGATES AND BITUMEN

The bitumen shall be heated so that it can be distributed uniformly and care shall be taken not to overheat it. The temperature shall never exceed 170⁰ C for 80/100 bitumen.

The aggregates shall be dried and heated so that they are mixed at the following temperatures: -

125-165⁰C when 80/100 bitumen is used.

The dried aggregates shall be combined in the mixer in the amount of each fraction instructed by the Engineer and the bitumen shall then be introduced into the mixer in the amount specified. The materials shall then be mixed until a complete and uniform coating of the aggregate is obtained.

The mixing time shall be the shortest required to obtain a uniform mix and thorough coating. The wet mixing time shall be determined by the Contractor and agreed by the Engineer for each plant and for each type of aggregate used. It shall normally not exceed 60 seconds.

1608A TRANSPORTING THE MIXTURE

The bituminous mix shall be kept free of contamination and segregation during transportation. Each load shall be covered with canvas or similar covering to protect it from the weather and dust.

1609A LAYING THE MIXTURE

Immediately after the surface has been prepared and approved, the mixture shall be spread to line and level by the laying plant without segregation and dragging.

The mixture shall be placed in widths of one traffic lane at a time, unless otherwise agreed by the Engineer. The compacted thickness of any layer shall be at least 2.5 times the maximum size of the aggregate for wearing course and at least 2 times for binder course. The minimum thickness shall be 25mm.

Only on areas where irregularities or unavoidable obstacles make the use of mechanical laying impracticable, may the mixture be spread and compacted by hand.

1610A COMPACTION

Immediately after the bituminous mixture has been spread, it shall be thoroughly and uniformly compacted by rolling.

The layer shall be rolled when the mixture is in such a condition that rolling does not cause undue displacement or shoving.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. The sequence of rolling operations shall be as agreed with the Engineer and proved during site trials. Initial rolling with steel tandem or three-wheeled roller shall follow the laying plant as closely as possible. The rollers shall be operated with the drive roll nearest the laying plant, at a slow and uniform speed (not exceeding 5 Km/Hr).

Rolling shall normally commence from the outer edge and proceed longitudinally parallel to the centreline, each trip overlapping one half of the roller width. On super elevated curves, rolling shall begin at the low side and progress to the high side. Where laying is carried out in lanes care must be taken to prevent water entrapment.

Intermediate rolling with a pneumatic-tyred or vibratory roller shall follow immediately. Final rolling with a steel-wheeled roller shall be used to eliminate marks from previous rolling.

To prevent adhesion of the mixture to the rollers, the wheels shall be kept lightly moistened with water.

In areas too small for the roller, a vibrating plate compactor or a hand tamper shall be used to achieve the specified compaction.

1611A FINISHING, JOINTS AND EDGES

Any mixture that becomes loose and broken, mixed with dirt or foreign matter or is in any way defective, shall be removed and replaced with fresh hot mixture, which shall be compacted to conform to the surrounding area.

Spreading of the mixture shall be as continuous as possible. Transverse joints shall be formed by cutting neatly in a straight line across the previous run to expose the full depth of the course. The vertical face so formed shall be painted lightly with hot 80/100 penetration grade bitumen just before the additional mixture is placed against it.

Longitudinal joints shall be rolled directly behind the paving operation. The first lane shall be placed true to line and level and have an approximately vertical face. The

mixture placed in the abutting lane shall then be tightly crowded against the face of the previously placed lane. The paver shall be positioned to spread material overlapping the joint face by 20-30mm. Before rolling, the excess mixture shall be raked off and discarded.

When the abutting lane is not placed in the same day, or the joint is destroyed by traffic, the edge of the lane shall be cut back as necessary, trimmed to line and painted lightly with hot 80/100 penetration grade bitumen just before the abutting lane is placed.

Any fresh mixture spread accidentally on the existing work at a joint shall be carefully removed by brooming it back on to uncompacted work, so as to avoid formation of irregularities at the joint. The finish at joints shall comply with the surface requirements and shall present the same uniformity of finish, texture and density as other sections of the work.

The edges of the course shall be rolled concurrently with or immediately after the longitudinal joint. In rolling the edges, roller wheels shall extend 50 to 100mm beyond the edge.

1612A SAMPLING AND TESTING OF BITUMINOUS MIXTURES

The sampling of bituminous mixtures shall be carried out in accordance with AASHTO T168 (ASTM Designation D979).

1613A QUALITY CONTROL TESTING

During mixing and laying of bituminous mixtures, control tests on the constituents and on the mixed material shall be carried out in accordance with Clause 1612A and Section 2 of this Specification.

If the results of any tests show that any of the constituent materials fail to comply with this Specification, the Contractor shall carry out whatever changes may be necessary to the materials or the source of supply to ensure compliance.

If the results of more than one test in ten on the mixed material show that the material fails to comply with this Specification, laying shall forthwith cease until the reason for the failure has been found and corrected. The Contractor shall remove any faulty material laid and replace it with material complying with this Specification all at his own expense.

1614A TOLERANCES

Surfacing courses and base shall be constructed within the geometric tolerances specified in Section 3 of this Specification.

The Contractor shall maintain the composition of the mixture as determined from the laboratory and site trials within the following tolerances, per single test: -

Bitumen Content	±0.3% (by total weight of total mix)
Passing 10mm sieve and larger sieves	±6% (by total weight of dry aggregate including mineral filler)
Passing sieves between 10mm and 1.0mm sieves	±4% (by total weight of dry aggregate including mineral filler)

Passing sieves between 1.0mm and 0.075mm sieve $\pm 3\%$ (by total weight of dry aggregate including mineral filler)

Passing 0.075mm sieve including mineral filler $\pm 2\%$ (by total weight of dry aggregate)

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The final average overall width of the upper surface of a bituminous mix layer measured at six equidistant points over a length of 100m shall be at least equal to the width specified. At no point shall the distance between the centreline of the road and the edge of the upper surface of a bituminous mix layer be narrower than that specified by more than 13mm.

1615A MEASUREMENT AND PAYMENT

No separate measurement and payment shall be made for complying with the requirements of Clauses 1601A to 1614A inclusive and the Contractor shall be deemed to have allowed in his rates in Parts B and C of Section 16 of this Specification for the costs of complying with the requirements of Part A of Section 16 of this Specification

PART B - ASPHALT CONCRETE FOR SURFACING

1601B DEFINITION

Asphalt concrete means a thoroughly controlled, hot-mixed, hot-laid, plant mixture of well-graded dried aggregate and penetration grade bitumen, which, when compacted forms a dense material.

A distinction is drawn between asphalt concrete Type I (High Stability) and asphalt concrete Type II (Flexible). The asphalt concrete type to be used will be Type I.

Asphaltic Concrete Type I shall be used and shall meet all the requirements of the relevant Clauses of both Standard Specifications for Roads and Bridges construction of Ministry of Transport and Communication and the current (August 1987) Ministry of Roads and Public Works Road Design Manual Part III. Where the requirements of the two differ, those of Standard Specifications for Roads and Bridges shall prevail.

1602B MATERIALS FOR ASPHALT CONCRETE TYPE 1

a) Type of bituminous material

The type of material to be used on severe sites will be of the continuously graded type similar to Asphaltic Concrete or Close Graded Macadam. It is

essential that these materials are sealed with a single or double surface dressing or a Cape seal.

b)Penetration Grade Bitumen

Bitumen shall be 80/100 penetration grade.

c)Aggregate

Stone Class b
Grading 0/20

d)Mineral filler - as per Clause 1602B (c)

Introduce the following amendments to Section 16 of Standard Specifications:

1602B(b) - the aggregate for asphalt concrete Type I shall comply with the requirements for coarse aggregates class b as specified in clause 1602B(b) of Standard Specifications

1602B(c) - the grading for aggregate for binder course shall conform to the requirements for Type I binder course asphalt concrete as given in table 16B-1

1604B - the requirements for asphalt concrete shall conform to the specifications for Type I Binder course as given in clause 1604(B) of Standard Specifications table 16B-2

1607B(b) Variation in binder content - there shall be no extra payment for variation of binder content from the that specified in the design mix.

1607BMEASUREMENT AND PAYMENT

a)Item : Asphalt Concrete

Unit: m³ of Asphalt Concrete Used

Asphalt concrete shall be measured by the cubic metre compacted on the road calculated as the product of the length instructed to be laid and the compacted cross-sectional area shown on the Drawings or instructed by the Engineer.

The rate for asphalt concrete shall include for the cost of providing, transporting, laying and compacting the mix with the nominal binder content and complying with the requirements of Parts A and B of Section 16 of this Specification.

b)Item: Variation in Binder Content

Unit: Litre

No separate payment shall be made for this item and the Bidder will be deemed to have included this in other bill items.

a)Item: Mineral Filler

Unit: Tonne of each Type

No separate payment shall be made for this item and the Bidder will be deemed to have included this in other bill items.

b)Item: Sand

Unit: Tonne from each source

No separate payment shall be made for this item and the Bidder will be deemed to have included this in other bill items.

The Engineer may require the addition or substitution of mineral filler to modify a grading curve which already meets the specified requirements.

SECTION 20: ROAD FURNITURE REPAIR AND MAINTENANCE

2001: Traffic Sign Maintenance

This activity involves all the tasks required to ensure that the road signs and signposts are in a clean, properly aligned, vertical and secure condition; the replacement of missing or broken bolts, nuts or other fixings and the tightening of the same. The maintenance shall also extend to securing any loose posts by the re-compacting or removal of any unsuitable material surrounding the posts, importing and compacting of suitable material to render the post secure.

Work Method

The Contractor shall use **Labour** to carry out this item.

Quality Control

- The signs shall be clean and in vertical position
- The fixings shall be hand checked to be tight

Measurement Unit: No.

The measurement shall be number of signs maintained.

Payment

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

2003: Guardrail Repair

This activity involves the repair of Guardrails (including rails, posts and fixings) to a properly aligned, vertical and secure condition. The repair shall include securing any loose posts by re-compaction or removal of any unsuitable material surrounding the post, importing and compaction of suitable materials to render the posts secure, and the re-fixing of the rails.

Work Method

The Contractor shall use **Labour** to carry out this item.

Quality Control

- The guardrails shall be checked as being properly aligned secure and in a vertical position
- The fixings shall be hand checked to be firmly fixed

Measurement Unit: m

The measurement shall be the length of Guardrail repaired

Payment

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

2004: Marker Posts Replacement

This activity involves the replacement of kilometre stones and culvert marker posts

The Engineer shall determine the location of the marker stones and posts. They shall be set in a simple excavation and backfilled with soil. The depth of the excavation shall be determined on the site, depending on the size and shape of the marker stone or post.

Work Method

The Contractor shall use **Labour** to carry out this item.

Quality Control

- The posts shall be vertical and firmly bedded to the approval of the Engineer

Measurement Unit: No

The measurement shall be in number of marker posts.

Payment

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

2006: Sign cleaning and repainting

This activity involves the cleaning of road signs, reflectors and guideposts and repainting of sign supporting structures, rear panels of signs, kilometre posts and culvert markers. Surfaces to be painted shall be clean, dry and free from loose material.

Work Method

The Contractor shall use **Labour** to carry out this item of work

Quality Control

- The cleaning and painting shall be carried out to the approval of the Engineer

Measurement Unit: No

The measurement shall be in number of signs, reflectors, or guideposts cleaned or painted.

Payment

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

SECTION 22-DAYWORKS

2202 MEASUREMENTS AND PAYMENT

(a) Plant

Where items of major plant listed in the schedule of Dayworks are specified by type (e.g. Concrete mixer etc.) the power rating if such items of plant are provided by the Contractor shall not be lower than the power ratings of such plant manufactured within the last two years prior to the date of BID. Any item of major plant employed upon Dayworks that has a power rating lower than specified above shall be paid for at rates lower than those in the schedule of Dayworks. The reduction in the rate payable shall be in proportion to the reduction in power rating below that specified above

SECTION 25:**HIV/AIDS AWARENESS AND PREVENTION CAMPAIGN****Scope:**

This section covers the Contractors obligations with regard to on-site HIV / AIDS awareness campaign and preventive measures that are to be instituted.

2501 HIV / AIDS Awareness Campaign

The Contractor shall institute an HIV / AIDS awareness campaign amongst the workers for the duration of the Contract.

As part of the campaign the Contractor shall display AIDS awareness posters in all buildings frequented by workers employed on the Contract, where such buildings fall under the control of the Contractor.

In addition at least two of the Contractors vehicles regularly used on site shall display HIV / AIDS awareness posters. The posters shall be printed on gloss paper and shall be at least A1 size on buildings and A3 size or other approved size on vehicles. The message on the posters shall be supplied by the Employer through the Engineer.

Aids awareness shall also be included in the orientation process of all workers employed on the Contract.

Measurement Unit: month

The measurement shall be the calendar month or part thereof, measured over the duration of the campaign.

Payment

The unit rate shall include full compensation for labour and material required for the provision of the item.

2502 AIDS Prevention Campaign

The Contractor shall institute an HIV / AIDS prevention campaign amongst the workers for the duration of the Contract.

As part of the campaign the Contractor shall make condoms available to the workers. The condoms shall be supplied by the Employer through the Engineer.

Measurement Unit: month

The measurement shall be the calendar month measured over the duration of the campaign.

Payment

The unit rate shall include full compensation for labour and material including the distribution of condoms, required for the provision of the item.

**SECTION 13: DRAWINGS (See
the Book of Drawings)**

BILLS OF QUANTITIES

[illegible]

TENDER NO. KeRRA/011/39/25/2019-20

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Note: No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices</i>				
4.01	Clear site on road reserve including removal of all growths, bushes,hedges, trees, stumps, grub up roots, and other deleterious materials and back-fill and compact to 100% MDD(AASHTO T99) with approved material as directed by the Engineer.	Ha.	20.00		
	Bill No. 4 Total Carried Forward to Grand Summary				

TENDER NO. KeRRA/011/39/25/2019-20

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	NOTE: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included in the rates inserted herein				
9.01	Allow for the passage of traffic through and around the works	LS	1		-
	Bill No. 9 Total Carried Forward to Grand Summary				-

BILL NO. 11 : SHOULDER TO CARRIAGEWAY PAVEMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Note: No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates</i>				
11.01	Grade,shape,water and compact existing shoulders,access and busbays where directed by Engineer	m ²	28,000.00		-
11.02	Provide gravel,water,process and compact as specified existing shoulders,access and busbays where directed by the Engineer.	m ³	4,500.00		-
	Bill No. 11 Total Carried Forward to Grand Summary				

BILL NO. 12 : NATURAL MATERIAL FOR BASE

[illegible]

TENDER NO. KeRRA/011/39/25/2019-20[illegible]

TENDER NO. KeRRA/011/39/25/2019-20

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15.01	Prepare surface of carriageway, shoulders and repair areas, provide, heat and spray MC 30 cutback bitumen prime coat at rate of 0.8-1.2 Litres/m ² as prime coat for potholes,shoulders,busbays	Litres	22,937.00		-
					-
15.02	Provide,heat and spray 80/100 pen grade bitumen binder as binder coat at a spray rate of 0.8-1.2 liters/m ² or as directed by the Engineer	Litre	14,776.00		-
15.03	Provide,transport,lay and roll 10/14mm class 1 precoated,chippings for 1st seal to carriageway and shoulders at a spread rate 90-120/m ³ or as directed by the Engineer	m ³	167.00		-
Bill No. 15 Total Carried Forward to Grand Summary					

TENDER NO. KeRRA/011/39/25/2019-20[illegible]

TENDER NO. KeRRA/011/39/25/2019-20

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>PLANT</u>				
	<i>The rates inserted herein are to include all operational and Maintenance costs, fuel, oil, grease, drivers/operators wages, supervision, overheads and profit. Only time actually employed upon the work will be paid for and the rates should include for idle time, travelling time and overtime, In accordance with clause 2202 (a) of the specifications. Note: All items of plant must be priced.</i>				
22.01	Crawler dozers with hydraulic attachmentsto include ripper				
	a) Up to 135 kw rated flywheel power	hrs	220		-
	Bill No. 22 Total Carried Forward to Grand Summary				-

SUMMARY PAGE		
BILL ITEM	DESCRIPTION	AMOUNT(KShs)
1	Preliminaries and General Items	
4	Site Clearance and Top Soil Stripping	
9	Passage to Traffic	
11	Shoulders to carriageway pavement	
12	Natural Gravel Base and Subbase	
14	Lime/Cement Improved gravel Subbase and Base	
15	Bituminous Surface Treatment and Surface Dressing	
16	Bituminous Mixes	
22	Schedule of Dayworks.	
(A)	SUB-TOTAL (1)	
(B)	Add 5% of sub - total 1 of BIMS as Provisional Sum for contingencies to be expended in whole or part as directed by the	
(D)	SUB-TOTAL (2) = (A + B)	
(E)	Add ...16% VAT of sub-total (2)	
TOTAL (D+ E) carried to the form of tender		