

RT/56



KENYA RURAL ROADS AUTHORITY

(TAITA TAVETA REGION)

**TENDER DOCUMENT – ROUTINE MAINTENANCE WORKS
FOR PROCUREMENT OF ROAD WORKS FY 2019/2020
SECTION NAME: KIWANDE – MOGHO ACK (ROAD C272) IN
WUNDANYI CONSTITUENCY**

TENDER NUMBER: : KeRRA/011/TTVT/39/076/2019-2020

(Open to Prequalified Bidders in the Constituency)

BID DOCUMENT FOR ROUTINE MAINTENANCE

- INVITATION FOR TENDERS
- INSTRUCTIONS TO BIDDERS
- QUALIFICATION CRITERIA
- CONDITIONS OF CONTRACT
- APPENDIX TO FORM OF AGREEMENT
- STANDARD FORMS
- SPECIFICATIONS, DRAWINGS AND BILLS OF QUANTITIES

GoK DEVELOPMENT FUNDING

August, 2020

The Engineer

DEPUTY DIRECTOR (TAITA TAVETA REGION),
KENYA RURAL ROADS AUTHORITY,
P.O. BOX 131 – 80300,
VOI.

The Employer

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

TABLE OF CONTENTS

CONTENTS	PAGE NO.
SECTION I: INVITATION FOR TENDERS	2
SECTION II: INSTRUCTIONS TO TENDERERS	3
INSTRUCTIONS TO TENDERERS.	1
1. GENERAL	1
2. TENDER DOCUMENTS	2
3. PREPARATION OF TENDERS	2
4. SUBMISSION OF TENDERS	3
5. TENDER OPENING AND EVALUATION	4
6. ABNORMALLY LOW TENDERS AND ABNORMALLY HIGH TENDERS	5
7. UNBALANCED AND/OR FRONT-LOADED TENDERS	6
8. AWARD OF CONTRACT	7
9. CORRUPT AND FRAUDULENT PRACTICES	8
SECTION III: QUALIFICATION CRITERIA	9
SECTION IV: CONDITIONS OF CONTRACT	11
APPENDIX TO FORM OF BID	21
SECTION VI: STANDARD FORMS	22
SECTION VIII: SPECIFICATIONS, DRAWINGS AND BILLS OF QUANTITIES	46
DRAWINGS	76
PREAMBLE TO BILLS OF QUANTITIES	98

SECTION I: INVITATION FOR TENDERS

- 1.1 The KeRRA Taita Taveta invites sealed tender for the Routine Maintenance of the above road

SCOPE OF WORK

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

QUALIFICATION FOR TENDERING

- 1.3 The qualification criteria shall be as described in the tender document
- 1.4 The allocated budget for these works is KShs 5 Million
- 1.5 Note: All submitted Documents may be verified from the issuing agencies, KeRRA Reserves the right to verify all submitted documents
- 1.6 Due to the COVID -19 pandemic and consequently the Presidential Directives issued, there shall be NO Pre-Tender Site Visits. However, bidders are encouraged to make personal arrangements to acquaint themselves with the site before submissions of their bids.
- 1.7 Interested contractors may obtain the tender documents from KeRRA website www.kerra.go.ke and the IFMIS Suppliers portal www.supplier.treasury.go.ke for free of charge from August 18th, 2020. Interested eligible candidates may obtain further information at KeRRA - Taita-Taveta Regional Offices, P.O. Box 131-80300 Voi, in Voi Town. Along the C105 Voi town loop during normal working hours.
- 1.8 Prices quoted should be net inclusive of all taxes, must be in Kenya shillings and shall remain valid for **180** days from the closing date of tender.
- 1.9 Completed tender documents addressed to Deputy Director, KeRRA-Taita Taveta Region are to be enclosed in plain sealed envelopes marked with Tender name and reference number and deposited in the tender box at KeRRA Taita – Taveta, P.O. Box 131 -80300, Voi reception, so as to be received not later than 11.00 A.M on September 8th & 9th, 2020.
- 1.10 Tenders will be opened immediately thereafter in the presence of the candidates or their representatives who choose to attend at Kenya Rural Roads Authority P.O. Box 131 -80300, Voi.

SECTION II: INSTRUCTIONS TO TENDERERS

TABLE OF CONTENTS

CLAUSE	PAGE.
SECTION II: INSTRUCTIONS TO TENDERERS	3
INSTRUCTIONS TO TENDERERS.	1
1. GENERAL	1
2. TENDER DOCUMENTS	2
3. PREPARATION OF TENDERS	2
4. SUBMISSION OF TENDERS	3
5. TENDER OPENING AND EVALUATION	4
6. ABNORMALLY LOW TENDERS AND ABNORMALLY HIGH TENDERS	5
7. UNBALANCED AND/OR FRONT-LOADED TENDERS	6
8. AWARD OF CONTRACT	7
9. CORRUPT AND FRAUDULENT PRACTICES	8
10. SECTION III: QUALIFICATION CRITERIA	9

INSTRUCTIONS TO TENDERERS.

1. General

- 1.1 The Employer as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The successful Tenderer will be expected to complete the Works by the Intended Completion Date specified in the said Appendix.
- 1.2 Tenderers shall include the following information and documents with their tenders, unless otherwise stated:
 - (a) The bidders must be prequalified in the constituency
 - (b) Prove of a bank account (the bidder shall provide a bank statement {last 3 months} or letter from the bank to prove that the bidder has a bank account within the last 6 months)
 - (c) Experience in works of a similar nature and size for each of the last three years, and clients who may be contacted for further information on these contracts; The bidder shall attach completion certificates for the completed road works for last three years
 - (d) Valid Registration and Annual Practicing License with National Construction Authority Category 6,7 and 8 at the date of tender of submission
 - (e) Certified copies of Certificate of Incorporation or Business Registration Certificate with original stamp (copies of stamped certificate will not be accepted)
 - (f) PIN and VAT Registration Certificate
 - (g) Copy of CR12
 - (h) Clear & certified Directors' Copies of Identification cards
 - (i) Valid current Tax compliance certificate as at closing date
 - (j) Bidders shall sequentially serialise all pages of each tender submitted
 - (k) Work Methodology (Minimum of two (2) pages)
 - (l) To enhance equity
 - i. Bidders shall bid for a maximum of two (2) Tenders but can only be awarded a Maximum of One (1) Tender, under this Tender Notice.
 - ii. Bidders awarded contracts within the last four months are ineligible for award
 - iii. Director (s) bidding under different companies for the same tender shall be disqualified
 - iv. Director (s) bidding under different companies should not participate in more than Two (2) tenders
- 1.3 Bidders with pending work behind schedule are not eligible to apply. Bidders can only be awarded one tender per Constituency.
- 1.4 The Tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible or liable for those costs
- 1.5 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the Works and its surroundings, and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Tenderer's own expense. Bidders shall sign the **Declaration of Knowledge of Site**. There will be no variation cost in the execution of the tender.
- 1.6 The procurement entity's employees, committee members, board members and their

relative(s) (spouse and children) are not eligible to participate in the tender.

2. Tender Documents

- 2.1 The complete set of tender documents comprises the documents listed here below and any addenda issued in accordance with clause 2.4 here below:-
- (a) These instructions to Tenderers
 - (b) Form of Tender
 - (c) Conditions of Contract and Appendix to Form of Agreement
 - (d) Specifications
 - (e) Drawings
 - (f) Bills of Quantities
 - (g) Other materials required to be filled and submitted in accordance with these Instructions and Conditions
- 2.2 The Tenderer shall examine all instructions, forms and specifications in the tender documents. Failure to furnish all information required by the tender documents may result in rejection of his tender.
- 2.3 A prospective Tenderer making inquiries of the tendering documents may notify the Employer in writing or by cable, telex or facsimile at the address indicated in the letter of invitation to tender. The Employer will respond to any request for clarification received earlier than seven [7] days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all persons issued with tendering documents, including a description of the inquiry, but without identifying its source.
- 2.4 Before the deadline for submission of tenders, the Employer may modify the tendering documents by issuing addenda. Any addendum thus issued shall be part of the tendering documents and shall be communicated in writing or by cable, telex or facsimile to all Tenderers. Prospective Tenderers shall acknowledge receipt of each addendum in writing to the Employer.
- 2.5 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend, as necessary, the deadline for submission of tenders in accordance with clause 4.2 here below.

3. Preparation of Tenders

- 3.1 All documents relating to the tender and any correspondence shall be in English Language.
- 3.2 The bid to be prepared by the bidder shall comprise the following filled documents: -
- (a) properly filled form of tender
 - (b) properly filled confidential business questionnaire
 - (c) filled form of written power of attorney
 - (d) fraud and corruption forms
 - (e) Declaration forms.
 - (f) current litigation information
 - (g) Environmental and social commitment
 - (h) initialed Priced Bill of Quantities for lump-sum Contracts on each page
 - (i) Any other materials required to be completed and submitted by Tenderers.

- 3.3 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. All duties, taxes and other levies payable by the Contractor under the Contract, as of 30 days prior to the deadline for submission of tenders, shall be included in the tender price submitted by the Tenderer.
- 3.4 The rates and prices quoted by the Tenderer shall not be subject to any adjustment during the performance of the Contract.
- 3.5 The unit rates and prices shall be in Kenya Shillings.
- 3.6 Tenders shall remain valid for a period of One eighty (180) days from the date of submission. However, in exceptional circumstances, the Employer may request that the Tenderers extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing.
- 3.7 The Tenderer shall prepare one original of the documents comprising the tender documents as described in these Instructions to Tenderers.
- 3.8 The original shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Tenderer. All pages of the tender where alterations or additions have been made shall be initialed by the person or persons signing the tender.
- 3.9 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders. The procuring entity shall reply to any clarifications sought by the tenderer within 7 days of receiving the request to enable the tenderer to make timely submission of its tender.
- 3.10 The bidder shall prepare one original of the documents comprising the bid as described in Clause 3.7 of these Instructions to Bidders, bound with the section containing the Form of Bid and Appendix to Bid, and clearly marked "ORIGINAL". Both the original and the attached documents must be serialised on all pages. **Failure to serialise will lead to disqualification.**
- 3.11 The original 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. The person or persons signing the bid shall initial all pages of the bid where entries or amendments have been made: **Non-initialization shall constitute non-responsiveness**
- 3.12 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.

4. Submission of Tenders

- 4.1 The tender duly filled and sealed in an envelope shall;-
- (a) be addressed to the Employer at the address provided in the invitation to tender;

[b] bear the name and identification number of the Contract as defined in the invitation to tender; and

[c] Provide a warning not to open before the specified time and date for tender opening.

- 4.2 Tenders shall be delivered to the Employer at the address specified above not later than the time and date specified in the invitation to tender.
- 4.3 The tenderer shall not submit any alternative offers unless they are specifically required in the tender documents.
- 4.4 Only one tender may be submitted by each tenderer. Any tenderer who fails to comply with this requirement will be disqualified.
- 4.5 Any tender received after the deadline for opening tenders will be returned to the tenderer unopened.
- 4.6 The Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with sub-clause 2.5 in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will then be subject to the new deadline.

5. Tender Opening and Evaluation

- 5.1 The tenders will be opened in the presence of the Tenderers' representatives who choose to attend at the time and in the place specified in the invitation to tender.
- 5.2 The Tenderers' names, the total amount of each tender and such other details as may be considered appropriate, will be announced at the opening by the Employer. Minutes of the tender opening, including the information disclosed to those present will also be prepared by the Employer.
- 5.3 Information relating to the examination, clarification, evaluation and comparison of tenders and recommendations for the award of the Contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced. Any effort by a Tenderer to influence the Employer's officials, processing of tenders or award decisions may result in the rejection of his tender.
- 5.4 Tenders determined to be substantially responsive will be checked for any arithmetic errors. Errors checks will be as follows:
- (a) where there is a discrepancy between the amount in figures and the amount in words, the amount in words will prevail; and
 - (b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive.
- 5.5 The Employer will carry out evaluation of details and information provided in Qualification Questionnaire and any bidder who does not qualify shall not have his/her bid evaluated further.
- 5.6 The Employer will then evaluate and compare only the bids determined to be substantially responsive

- 5.7 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. The bidder shall within FOUR (4) days after issuance of the written notice by the employer, or such further time as the Employer may allow, provide a satisfactory analysis for the items asked for by the Employer.
- 5.8 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.
- 5.9 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.
- 5.10 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.
- 5.11 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.
- 5.12 Contract price variations shall not be allowed for contracts not exceeding one year (12 months)
- 5.13 Where contract price variation is allowed, the valuation shall not exceed 25% of the original contract price.
- 5.14 Price variation requests shall be processed by the procuring entity within 30 days of receiving the request.
- 5.15 To assist in the examination, evaluation, and comparison of tenders, the Employer at his discretion, may request [in writing] any Tenderer for clarification of the tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, telex or facsimile but no change in the tender price or substance of the tender shall be sought, offered or permitted.
- 5.16 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules.
- 5.17 The Tenderer shall not influence the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. Any effort by the Tenderer to influence the Employer or his employees in his decision on tender evaluation, tender comparison or Contract award may result in the rejection of the tender.

6. Abnormally Low Tenders and Abnormally High Tenders

6.1. Abnormally Low Tenders

- a. An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price.
- b. In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.
- c. After evaluation of the price analyses, in the event that the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

6.2. Abnormally High Tenders

- a. An Abnormally High Tender is one where the Tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) is not getting value for money or paying too high a price for the works compared with market prices, or that genuine competition between Tenderers is compromised.
- b. In the event of identification of a potentially Abnormally High Tender, the Procuring Entity shall make a quick survey of the market prices and review the bidding documents to check whether the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the Tenderer on the reason for the high tender price.
- c. After the above considerations have been completed, in the event that the Procuring Entity determines that the Tenderer Price is abnormally too high and that it undermines the achievement of value for money, the Procuring Entity shall reject all the Tenders and may retender for the works on basis of, if need be, revised specifications, scope of work and conditions of contract.

7. Unbalanced and/or Front-Loaded Tenders

- 7.1. If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.
- 7.2. After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:
 - (a) accept the Tender; or
 - (b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price; or

- (c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
- (d) reject the Tender.

Bidders are encouraged to NOT bid below 20% of the engineers estimate

8. Award of Contract

- 8.1. The award of the Contract will be made to the Tenderer who has offered the lowest evaluated tender price.
- 8.2. Notwithstanding the provisions of clause 8.1 above, the Employer reserves the right to accept or reject any tender and to cancel the tendering process and reject all tenders at any time prior to the award of Contract without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the action.
- 8.3. The Tenderer whose tender has been accepted will be notified of the award prior to expiration of the tender validity period in writing or by cable, telex or facsimile. This notification (hereinafter and in all Contract documents called the "Letter of Acceptance") will state the sum [hereinafter and in all Contract documents called the "Contract Price" which the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract. The contract shall be formed on the parties signing the contract. At the same time the other tenderers shall be informed that their tenders have not been successful.
- 8.4. Standstill period: The Contract shall not be awarded earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply. Where only one Tender is submitted, the Standstill Period shall not apply. Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Award the Contract to the successful Tenderer.
- 8.5. The Contract Agreement will incorporate all agreements between the Employer and the successful Tenderer. It will be signed by the Employer and sent to the successful Tenderer, within 30 days following the notification of award. Within 14 days of receipt, the successful Tenderer will sign the Agreement and return it to the Employer.
- 8.6. Within 21 days after receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Performance Security amount stipulated in the Appendix to Conditions of Contract.
- 8.7. The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.
- 8.8. The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.
- 8.9. The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

9. Corrupt and fraudulent practices

- 9.1. The procuring entity requires that the tenderer observes the highest standard of ethics during the procurement process and execution of the contract. A tenderer shall sign a declaration that he has not and will not be involved in corrupt and fraudulent practices.
- 9.2. The procuring entity will reject a tender if it determines that the tenderer recommended for award has engaged in corrupt and fraudulent practices in competing for the contract in question.
- 9.3. Further a tenderer who is found to have indulged in corrupt and fraudulent practices risks being debarred from participating in public procurement in Kenya

10. SECTION III: QUALIFICATION CRITERIA

Qualification Criteria (in addition to schedule below)			Compliance Requirements	Documentation
No.	Subject	Requirement	Single Entity	Submission Requirements
1. Eligibility				
1.1	Eligibility	Nationality in accordance with confidential business Questionnaire in the standard forms	Must meet requirement	Refer to standard form
1.4	Registration documents	The following shall be provided; (a) Certified copies of Certificate of Incorporation or Business Registration Certificate (b) PIN Registration & VAT obligation (not older than 1 year) (c) Proof of bank account in bidders name or bank statement (not older than 3 months from closing date) (d) Pretender site visit certificate/Declaration of Knowledge of Site (e) Copy of CR12 (not older than 1 year) (f) Clear certified copies of Directors of Identification cards (g) Valid current Tax compliance certificate or Tax Exempt Certificate a at closing date (h) Registration of contractors with NCA and valid practising licence NCA 6,7 and 8 for Road Works (i) Valid & Current County Single Business Permit (2020)	Must meet requirement	Refer to standard form
2.1	History of Non-Performing Contracts	Non-performance of a contract did not occur within the last three (3) 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	Refer to standard form
2.2	Pending Litigation	All pending litigation shall in total not represent more than fifty percent (50%)] of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement (Sworn Affidavit within 3 months)	Refer to standard form
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 b. capacity to have a cash flow amount as per schedule hereunder Notes: The Financial Ratios to be derived from first Principles from the Audit Statements	Must meet requirement (for open tenders) (a) Must meet requirement (b) Must meet requirement	Refer to standard form
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover as per schedule hereunder calculated as total certified payments received for contracts in progress or completed	Must meet requirement (for open tenders)	Refer to standard form

Qualification Criteria (in addition to schedule below)			Compliance Requirements	Documentation
No.	Subject	Requirement	Single Entity	Submission Requirements
4.1	General Construction Experience	Experience under construction contracts in the role of contractor, subcontractor, or management contractor as per schedule hereunder prior to the applications submission deadline	Must meet requirement	Refer to standard form (attach completion certificate)
4.2 (a)	Specific Construction Experience	Participation as contractor, management contractor or subcontractor, as per schedule below, 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 Scope of Works	Must meet requirement (for open tenders)	
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: - Routine maintenance - Spot improvement & rehabilitation works.	Must meet requirements (for open tenders)	
4.3	Work Methodology	Submission of a brief work methodology as per Bills of Quantity (ies) below	Should demonstrate understanding of the scope of works and other general requirements	Refer to standard form
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 as per schedule below	Must meet the requirement	Refer to standard form
6. Current Commitment				
6.1	On-going contracts	Should not have any contract on going within the Region	Must meet requirements	Refer to guideline notes
7. completeness of tender document				
7.1	Standard forms & BoQs	Bidders will appraise themselves with the content of this document. The document and its Bills of Quantities provided can only be amended via an addendum VAT calculation will be at 16% while payments shall be based on 14%	Must meet requirements	Refer to guideline notes
ALL Certification shall be by Commissioner of Oaths				
1. Shall have pages in the whole document numbered in the correct sequence including all appendixes and attachments (Mandatory). 2. Shall be firmly bound and should not have any loose pages. Spiral binding and files (spring and box) are not acceptable (Mandatory). 3. Shall be signed (where signatures are required) by a duly authorized representative as evidenced by a Power of Attorney (Mandatory).				

SECTION IV: CONDITIONS OF CONTRACT

	Table of Clauses	Page
1.	DEFINITIONS.....	20
2.	CONTRACT DOCUMENTS.....	21
3.	EMPLOYER'S REPRESENTATIVE'S DECISIONS.....	21
4.	WORKS, LANGUAGE AND LAW OF CONTRACT.....	22
5.	SAFETY, TEMPORARY WORKS AND DISCOVERIES.....	22
6.	WORK PROGRAM AND SUB-CONTRACTING.....	22
7.	THE SITE.....	22
8.	INSTRUCTIONS.....	23
9.	EXTENSION OF COMPLETION DATE.....	23
10.	MANAGEMENT MEETINGS.....	24
11.	DEFECTS.....	24
12.	BILLS OF QUANTITIES.....	25
13.	VARIATIONS.....	25
14.	PAYMENT CERTIFICATES AND FINAL ACCOUNT	26
15.	INSURANCES	27
16.	LIQUIDATED DAMAGES.....	27
17.	COMPLETION AND TAKING OVER.....	27
18.	TERMINATION.....	27
19.	PAYMENT UPON TERMINATION.....	28
20.	CORRUPT GIFTS AND PAYMENTS OF COMMISSION.....	28
21.	SETTLEMENT OF DISPUTES.....	29

CONDITIONS OF CONTRACT

1. Definitions

1.1 In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated;

“Bills of Quantities” means the priced and completed Bill of Quantities forming part of the tender[where applicable].

“Schedule of Rates” means the priced Schedule of Rates forming part of the tender [where applicable].

“The Completion Date” means the date of completion of the Works as certified by the Employer’s Representative.

“The Contract” means the agreement entered into by the Employer and the Contractor as recorded in the Agreement Form and signed by the parties.

“The Contractor” refers to the person or corporate body whose tender to carry out the Works has been accepted by the Employer.

“The Contractor’s Tender” is the completed tendering document submitted by the Contractor to the Employer.

“The Contract Price” is the price stated in the Letter of Acceptance.

“Days” are calendar days; “Months” are calendar months.

“A Defect” is any part of the Works not completed in accordance with the Contract.

“The Defects Liability Certificate” is the certificate issued by Employer’s Representative upon correction of defects by the Contractor.

“The Defects Liability Period” is the period named in the Appendix to Conditions of Contract and calculated from the Completion Date.

“Drawings” include calculations and other information provided or approved by the Employer’s Representative for the execution of the Contract.

“Employer” Includes Central or Local Government administration, Universities, Public Institutions and Corporations and is the party who employs the Contractor to carry out the Works.

“Equipment” is the Contractor’s machinery and vehicles brought temporarily to the Site for the execution of the Works.

“Site” means the place or places where the permanent Works are to be carried out including workshops where the same is being prepared.

“Materials” are all supplies, including consumables, used by the Contractor for incorporation in the Works.

“Employer’s Representative” is the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

“Specification” means the Specification of the Works included in the Contract.

“Start Date” is the date when the Contractor shall commence execution of the Works.

“ A Subcontractor” is a person or corporate body who has a Contract with the Contractor to carry out a part of the Work in the Contract, which includes Work on the Site.

“Temporary works” are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

“ A Variation” is an instruction given by the Employer’s Representative which varies the Works.

“The Works” are what the Contract requires the Contractor to construct, install, and turnover to the Employer.

2. Contract Documents

2.1 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority;

- (1) Agreement,
- (2) Letter of Acceptance,
- (3) Contractor’s Tender,
- (4) Conditions of Contract,
- (5) Specifications,
- (6) Drawings,
- (7) Bills of Quantities

3. Employer’s Representative’s Decisions

3.1 Except where otherwise specifically stated, the Employer’s Representative will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

4. Works, Language and Law of Contract

- 4.1 The Contractor shall construct and install the Works in accordance with the Contract documents. The Works may commence on the Start Date and shall be carried out in accordance with the Program submitted by the Contractor, as updated with the approval of the Employer's Representative, and complete them by the Intended Completion Date.
- 4.2 The ruling language of the Contract shall be English language and the law governing the Contract shall be the law of the Republic of Kenya.

5. Safety, Temporary works and Discoveries

- 5.1 The Contractor shall be responsible for design of temporary works and shall obtain approval of third parties to the design of the temporary works where required.
- 5.2 The Contractor shall be responsible for the safety of all activities on the Site.
- 5.3 Anything of historical or other interest or significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Employer's Representative of such discoveries and carry out the Employer's Representative's instructions for dealing with them.

6 Work Program and Sub-contracting

- 6.1 Within seven days after Site possession date, the Contractor shall submit to the Employer's Representative for approval a program showing the general methods, arrangements, order and timing for all the activities in the Works.
- 6.2 The Contractor may sub-contract the Works (but only to a maximum of 25 percent of the Contract Price) with the approval of the Employer's Representative. However, he shall not assign the Contract without the approval of the Employer in writing. Sub-contracting shall not alter the Contractor's obligations.

7 The site

- 7.1 The Employer shall give possession of all parts of the Site to the Contractor.
- 7.2 The Contractor shall allow the Employer's Representative and any other person authorised by the Employer's Representative ,access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

8.0 Instructions

- 8.1 The Contractor shall carry out all instructions of the Employer's Representative which are in accordance with the Contract.

9.0 Extension of Completion Date

- 9.1 The Employer's Representative shall extend the Completion Date if an occurrence arises which makes it impossible for completion to be achieved by the Intended Completion Date. The Employer's Representative shall decide whether and by how much to extend the Completion Date.
- 9.2 For the purposes of this clause, the following occurrences shall be valid for consideration; Delay by:-
- (a) force majeure, or
 - (b) reason of any exceptionally adverse weather conditions, or
 - (c) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works, or
 - (d) reason of the Employer's Representative's instructions issued under these Conditions, or
 - (e) reason of the contractor not having received in due time necessary instructions, drawings, details or levels from the Employer's Representative for which he specifically applied in writing on a date which having regard to the date for Completion stated in the appendix to these Conditions or to any extension of time then fixed under this clause was neither unreasonably distant from nor unreasonably close to the date on which it was necessary for him to receive the same, or
 - (f) delay on the part of artists, tradesmen or others engaged by the Employer in executing work not forming part of this Contract, or
 - (g) reason of delay by statutory or other services providers or similar bodies engaged directly by the Employer, or
 - (h) reason of opening up for inspection of any Work covered up or of the testing or any of the Work, materials or goods in accordance with these conditions unless the inspection or test showed that the Work, materials or goods were not in accordance with this Contract, or
 - (i) reason of delay in appointing a replacement Employer's Representative, or
 - (j) reason of delay caused by the late supply of goods or materials or in executing Work for which the Employer or his agents are contractually obliged to supply or to execute as the case may be, or
 - (k) delay in receiving possession of or access to the Site.

10 Management Meetings

- 10.1 A Contract management meeting shall be held regularly and attended by the Employer's Representative and the Contractor. Its business shall be to review the plans for the remaining Work. The Employer's Representative shall record the business of management meetings and provide copies of the record to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Employer's Representative either at the management meeting or after the management meeting and stated in writing to all who attend the meeting.
- 10.2 Communication between parties shall be effective only when in writing.

11 Defects

- 11.1 The Employer's Representative shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Employer's Representative may instruct the Contractor to search for a defect and to uncover and test any Work that the Employer's Representative considers may have a defect. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.
- 11.2 The Employer's Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the Appendix to Form of Agreement.
- 11.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Employer's Representative's notice. If the Contractor has not corrected a defect within the time specified in the Employer's Representative's notice, the Employer's Representative will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

12 Bills of Quantities

- 12.1 The Bills of Quantities shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rates in the Bills of Quantities for each item. Items against which no rate is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the rates for other items in the Bills of Quantities.
- 12.2 Where Bills of Quantities do not form part of the Contract, the Contract Price shall be a lump sum (which shall be deemed to have been based on the rates in the Schedule of Rates forming part of the tender) and shall be subject to re-measurement after each stage.

13 Variations

- 13.1 The Contractor shall provide the Employer's Representative with a quotation for carrying out the variations when requested to do so. The Employer's Representative shall assess the quotation and shall obtain the necessary authority from the Employer before the variation is ordered.
- 13.2 If the Work in the variation corresponds with an item description in the Bill of Quantities, the rate in the Bill of Quantities shall be used to calculate the value of the variation. If the nature of the Work in the variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 13.3 If the Contractor's quotation is unreasonable, the Employer's Representative may order the variation and make a change to the Contract Price, which shall be based on the Employer's Representative's own forecast of the effects of the variation on the Contractor's costs.

14 Payment Certificates and Final Account

- 14.1 The Contractor shall be paid after each of the following stages of Work listed here below (subject to re-measurement by the Employer's Representative of the Work done in each stage before payment is made). In case of lump-sum Contracts, the valuation for each stage shall be based on the quantities so obtained in the re-measurement and the rates in the Bill of Quantities.
- (i) Advance payment _____ (percent of Contract Price,
[after Contract execution] to be inserted by the Employer).
 - (ii) First stage (define stage)
 - (iii) Second stage (define stage)
 - (iv) Third stage (define stage)
 - (v) After defects liability period.
- 14.2 Upon deciding that Works included in a particular stage are complete, the Contractor shall submit to the Employer's Representative his application for payment. The Employer's Representative shall check, adjust if necessary and certify the amount to be paid to the Contractor within 21 days of receipt of the Contractor's application. The Employer shall pay the Contractor the amounts so certified within 30 days of the date of issue of each Interim Certificate.
- 14.3 The Contractor shall supply the Employer's Representative with a detailed final account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer's Representative shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if

it is correct and complete. If it is not, the Employer's Representative shall issue within 21 days a schedule that states the scope of the corrections or additions that are necessary. If the final account is still unsatisfactory after it has been resubmitted, the Employer's Representative shall decide on the amount payable to the Contractor and issue a Final Payment Certificate. The Employer shall pay the Contractor the amount so certified within 60 days of the issue of the Final Payment Certificate.

- 14.4 If the period laid down for payment to the Contractor upon each of the Employer's Representative's Certificate by the Employer has been exceeded, the Contractor shall be entitled to claim simple interest calculated pro-rata on the basis of the number of days delayed at the Central Bank of Kenya's average base lending rate prevailing on the first day the payment becomes overdue. The Contractor will be required to notify the Employer within 15 days of receipt of delayed payments of his intentions to claim interest.

15. Insurance

- 15.1 The Contractor shall be responsible for and shall take out appropriate cover against, among other risks, personal injury; loss of or damage to the Works, materials and plant; and loss of or damage to property.

16. Liquidated Damages

- 16.1 The Contractor shall pay liquidated damages to the Employer at the rate 0.001 per cent of the Contract price per day for each day that the actual Completion Date is later than the Intended Completion Date except in the case of any of the occurrences listed under clause 9.2. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

17. Completion and Taking Over

- 17.1 Upon deciding that the Work is complete the Contractor shall request the Employer's Representative to issue a Certificate of Completion of the Works, upon deciding that the Work is completed.
The Employer shall take over the Site and the Works within seven days of the Employer's Representative issuing a Certificate of Completion.

18. Termination

- 18.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of Contract shall include, but shall not be limited to, the following;
- (a) the Contractor stops Work for 30 days continuously without reasonable cause or authority from the Employer's Representative;
 - (b) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (c) a payment certified by the Employer's Representative is not paid by the Employer to the Contractor within 30 days after the expiry of the payment periods stated in sub clauses 14.2 and 14.3 hereinabove.

- (d) the Employer's Representative gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time.

18.2 If the Contract is terminated, the Contractor shall stop Work immediately, and leave the Site as soon as reasonably possible. The Employer's Representative shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

19. Payment Upon Termination

- 19.1 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on Site, plant, equipment and temporary works.
- 19.2 The Contractor shall, during the execution or after the completion of the Works under this clause, remove from the Site as and when required within such reasonable time as the Employer's Representative may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to him, and in default thereof, the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor.
- 19.3 Until after completion of the Works under this clause, the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefor the Employer's Representative shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract, the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

20. Corrupt Gifts and Payments of Commission

20.1 The Contractor shall not;

- (a) Offer or give or agree to give to any person in the service of the Employer any gifts or consideration of 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 with the Employer or for

showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Employer.

- (b) 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) shall be an offence under the Laws of Kenya.

21. Settlement of Disputes

- 21.1 Any dispute arising out of the Contract which cannot be amicably settled between the parties shall be referred by either party to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed by the chairman of the Chartered Institute of Arbitrators, Kenya branch, on the request of the applying party.

APPENDIX TO FORM OF BID

(This appendix forms part of the bid)

CONDITIONS OF CONTRACT	AMOUNT
Notice to Employer	The Director General, Kenya Rural Roads Authority, P.O.BOX 48151 – 00100, NAIROBI, KENYA
Notice to Engineer	Deputy Director, Kenya Rural Roads Authority, P.O.BOX 131 – 80300, Voi, KENYA
Source of Funds	GoK Development
Pre-Tender Site Visit	Due to COVID-19 Bidders will be expected to make their Own Site Visit Arrangements
Program to be submitted	Not later than 14 (fourteen) days after issuance of Order to Commence
Minimum amount of Third Party Insurance	Nil
Period for commencement, from Engineer's order to commence	14 days
Time for completion	Three (3) months
Amount of liquidated damages	0.001 percent per day
Limit of liquidated damages	10% of Contract Value
Minimum amount of interim certificates Maximum of three (3) interim certificates	Kshs.1,000,000 (one million)
Time within which payment to be made after Interim Payment Certificate signed by Engineer	30 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	30 days
Appointer of Arbitrator/Adjudicator	The Chartered Institute of Arbitrators (Kenya)
Address of Bidder	Name: P.O. Box City/Town..... Email: Telephone No:

.....
(Name & Title)

.....
(Signature)
Company Seal/ Stamp

.....
(Date)

SECTION VI: STANDARD FORMS

Table of Contents

CONTENTS:	PAGE
FORM OF INVITATION FOR TENDERS	23
FORM OF TENDER	24
LETTER OF AWARD	26
FORM OF AGREEMENT	27
QUALIFICATION INFORMATION	29
CONFIDENTIAL BUSINESS QUESTIONNAIRE	30
DECLARATION OF KNOWLEDGE OF SITE	32
FORM OF WRITTEN POWER-OF-ATTORNEY	33
KEY PERSONNEL (AS PER QUALIFICATION CRITERIA)	34
SCHEDULE OF THE PROPOSED APPROPRIATE EQUIPMENT.	35
SCHEDULE OF COMPLETED CIVIL WORKS CARRIED OUT IN THE PREVIOUS YEARS	36
SCHEDULE OF ONGOING PROJECTS	37
OTHER SUPPLEMENTARY INFORMATION	38
ADJUDICATOR'S AGREEMENT	39
FRAUD & CORRUPTION	41
ENVIRONMENTAL AND SOCIAL COMMITMENT	42
PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD	43
SELF-DECLARATION FORMS	44

FORM OF INVITATION FOR TENDERS

_____ [Date]

To: _____ [Name of Contractor]

_____ [Address]

Dear Sirs:

Reference: _____ [Contract Name]

You are qualified to tender for the above Contract.

We hereby invite you and other qualified Tenderers to submit a Tender for the execution and completion of the Works.

A complete set of Tender documents may be purchased from _____

_____ [Mailing address, cable/telex/facsimile numbers].

Upon payment of a non-refundable fee of KShs _____

All Tenders shall be delivered to:

_____ [Address and location]

at or before _____ (time and date). Tenders will be opened immediately thereafter, in the presence of those Tenderers' representatives who choose to attend.

Please confirm receipt of this letter and your intention to Tender in writing.

Yours faithfully,

_____ Authorized Signature

_____ Name and Title

FORM OF TENDER

NAME OF CONTRACT:

ROUTINE MAINTENANCE OF KIWANDE – MOGHO ACK (ROAD C272)

To the

Director General,

Kenya Rural Roads Authority, P.O. BOX 48151–00100, NAIROBI

Through

Deputy Director

Kenya Rural Roads Authority, Taita/Taveta Region

P.O. BOX 131 – 80300, Voi. _____ 2020 [Date]

Dear Sir,

Having examined the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above Works, We, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the

sum of KShs. _____ [Amount in figures]

Kenya Shillings _____

_____ [Amount in words]

We undertake, if our Tender is accepted, to commence the Works on the commencement date and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix.

We agree to abide by this Tender until _____ (Insert date) from the date submission and it shall remain binding upon us and may be accepted at any time before that date.

Unless and until a formal Agreement is prepared and executed this Tender together with

your written acceptance thereof, shall constitute a binding Contract between us.
We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this Day of 20

Signature.....in the capacity of

Duly authorized to sign bids on behalf of

(Name of Tenderer)

(Address of Tenderer).....

(Name of Witness).....

(Signature of Witness).....

(Address of Witness).....

(Occupation of Witness).....

LETTER OF AWARD

[Letterhead paper of the Employer]

_____ [Date]

To: _____
[Name of the Contractor]

[Address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated _____

for the execution of _____

[name of the Contract and identification number, as given in the Tender documents] for the Contract Price
of KShs. _____ [amount in figures][Kenya
Shillings _____ (amount in words)] in accordance with the Instructions to
Tenderers is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract
documents.

Authorized Signature

Name and Title of Signatory

Attachment :

FORM OF AGREEMENT

THIS AGREEMENT is made on theday of 2020 between the **Kenya Rural Roads Authority, of P.O. BOX 48151 - 00100, Nairobi, Kenya** hereinafter called the “**Employer**” of the one part and

M/s.....

P.O. Box

hereinafter called the “**Contractor**” of the other part.

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

.....

at a bid of KShs.

.....

.....

And has accepted a Bid by the Contractor to execute, complete and maintain 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 documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

The said BID dated -----

- Conditions of Contract; Parts I and II
- The Standard and Special Specifications;
- Priced Bill of Quantities;
- Letter of Acceptance;
- Form of Tender
- Drawings;
- Appendix to the Form of Agreement
- Schedule Of Supplementary Information
- Other Documents/Materials/Conditions agreed and documented.

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 covenants with the Employer to execute and complete the Works in conformity 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 at the Contract Price or such other sum as may become payable under the Contract 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:

Signature:

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

In the presence of:

Signature.....

By the said Contractor: (Name)

Signature..... Designation:.....
(For and on behalf of the said Contractor)

In the presence of :

Signature:..... Address:.....

QUALIFICATION INFORMATION

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full name of Tenderer;

.....

2. Full address of Tenderer to which Tender correspondence is to be sent (unless an agent has been appointed below);

.....

3. Telephone number (s) of Tenderer;

.....

4. **Valid Email of Tenderer;**

(In view of Government office visit regulations, all communications will be done through this email)

.....

5. Name of Tenderer's representative to be contacted on matters of the Tender during the Tender period;

.....

6. Details of Tenderer's nominated agent (if any) to receive Tender notices (name, address, telephone, telefax);

.....

.....

Signature of Tenderer

Make copy and deliver to: _____ (Name of Employer) (The Tenderer shall leave one copy at the time of purchase of the Tender documents)

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:

Plot No..... Street/Road

Postal Address.....Tel No.....

Nature of business.....

Current Trade Licence NoExpiring date

Maximum value of business which you can handle at any one time:

KShs

Name of your bankers

Branch

Part 2(a) - Sole Proprietor:

Your name in full :

Age..... Nationality Country of origin

Citizenship details

Part 2(b) - Partnership:

Give details of partners as follows:

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

Part 2(c) - Registered Company:

Private or public

State the nominal and issued capital of the company-

Nominal KShs..... Issued KShs

Give details of all directors as follows:

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

Part 2(d) – Interest in the Firm:

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

I certify that the information given above is correct.

..... (Title)	 (Signature)	 (Date)
------------------	----------------------	-----------------

* Attach proof of citizenship

DECLARATION OF KNOWLEDGE OF SITE

This is to certify that

[Name/s].....

.....

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

.....

.....

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

Kiwande – Mogho ACK (Road C272)

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

Signed.....

(Bidder's Representative)

.....

NOTE: This form must be completed , signed and initialed

FORM OF WRITTEN POWER-OF-ATTORNEY

The Tenderer shall state here below the name and address of his representative who is authorised to receive on his behalf correspondence in connection with the Tender.

.....

(Name of Tenderer's Representative in block letters)

.....

(Address of Tenderer's Representative)

.....

(Signature of Tenderer's Representative)

Notarized by Commissioner of Oaths

KEY PERSONNEL (as per qualification criteria)

DESIGNATION	NAME	NATIONALITY	SUMMARY OF QUALIFICATIONS AND EXPERIENCE
Headquarters: 1. Managing Director 2. 3. etc.			
Site Office: 1. Site Agent/ Supervisor 2. Foreman 3. Site Surveyor 4. 5.			

I certify that the above information is correct.

.....
(Title)

.....
(Signature)

.....
(Date)

SCHEDULE OF THE PROPOSED APPROPRIATE EQUIPMENT.

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	No of Equipment Owned by the Bidder	No. of equipment to be hired
1.	Pedestrian Roller – Man walk behind	0		
2.	Double drum vibrating pedestrian roller(3Tons)	0		
3.	Self-propelled single drum vibrating (10Tons)	1		
4.	Mobile concrete mixers	1		
5.	Excavator/loader	1		
6.	Concrete vibrators	1		
7.	Tipper payload 7 – 10 tonnes	4		
8.	Flat bed lorries	1		
9.	Water tankers (10,000 litres capacity)	1		
10.	Motor Grader	1		
11.	Crawler Tractor	0		

The Bidders must attach Proof of Ownership for the Minimum Required Equipment of the Qualifications Criteria (Logbooks - Motorized equipment, Custom Entry for the Stationary Plant and Equipment, Imported and Payment Receipts) for the minimum required equipment whether hired or owned.

I certify that the above information is correct.

.....
(Title)

.....
(Signature)

.....
(Date)

**SCHEDULE OF COMPLETED CIVIL WORKS CARRIED OUT IN THE PREVIOUS
YEARS**

DESCRIPTION OF WORKS AND CLIENT	TOTAL VALUE OF WORKS (KSHS)	CONTRACT PERIOD (YEARS)	YEAR COMPLETED

I certify that the above Civil Works were successfully carried out and completed by ourselves.

.....
(Title)

.....
(Signature)

.....
(Date)

SCHEDULE OF ONGOING PROJECTS

DESCRIPTION OF WORK AND CLIENT	CONTRACT PERIOD	DATE OF COMMEN- CEMENT	DATE OF COMPLETI ON	TOTAL VALUE OF WORKS (KSHS.)	% COMPLET ED TODATE

I certify that the above Civil Works are being carried out by ourselves and that the above information is correct.

.....
(Title)

.....
(Signature)

.....
(Date)

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 Tenderer's Bankers who may provide reference if contacted by the Employer.

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

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

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

I certify that the above information is correct.

.....
Title

.....
Signature

.....
Date

ADJUDICATOR'S AGREEMENT

Identification of Project:

.....
(the "Project")

Name and address of the Employer:

.....
(the "Employer")

Name and address of the Contractor:

.....
(the "Contractor")

Name and address of the Adjudicator:

.....
(the "Adjudicator")

Whereas the Employer and the Contractor have entered into a Contract ("the Contract") for the execution of the Project and wish to appoint the Adjudicator to act as adjudicator in accordance with the Rules for Adjudication ["the Rules"].

The Employer, Contractor and Adjudicator agree as follows:

1. The Rules and dispute provisions of the Contract shall form part of this Agreement.
2. The Adjudicator shall be paid:

A retainer fee of per calendar month(where applicable)

A daily fee of

Expenses (including the cost of telephone calls, courier charges, faxes and telexes incurred in connection with his duties; all reasonable and necessary travel expenses, hotel accommodation and subsistence and other direct travel expenses).

Receipts will be required for all expenses.

3. The Adjudicator agrees to act as Adjudicator in accordance with the Rules and has disclosed to the Parties any previous or existing relationship with the Parties or others concerned with the Project.
4. This Agreement shall be governed by the laws of.....
5. The Language of this Agreement shall be

SIGNED BY

For and on behalf of the Employer in the presence of

Witness
Name
Address
Date

SIGNED BY

For and on behalf of the Contractor in the presence of

Witness
Name
Address
Date

SIGNED BY

For and on behalf of the Adjudicator in the presence of

Witness
Name
Address
Date

FRAUD & CORRUPTION

- 1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site.
- 2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed.
- 3 For the purposes of this Sub-Clause:
 - (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) "Coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.
- 4 The Contractor declares that:
 - a) They did not engage in any action to influence the Project implementation process to the detriment of the Employer, in particular no collusive practice took place nor will take place, and The bidding proceedings, contract award, and execution have not and will not be subject to any corrupt practice as defined in the United Nations Convention to combat corruption dated 31 October 2003.

Dated this _____ day of _____ 20_____

Signature _____ in the capacity of _____

duly authorized to sign Tenders for and on behalf of
_____[Name of Tenderer] of

_____[Address of Tenderer]
[Initialled by representative, notarized and Seal or Stamp of Tenderer]

ENVIRONMENTAL AND SOCIAL COMMITMENT

I have taken due note of the importance to comply with environmental and social standards and regulations.

I, the undersigned, [.....] acting as the duly authorized representative of [.....],

With respect to the submission of a bid for [.....] in accordance with the invitation to tender No _____, I undertake to comply, and ensure that our subcontractors, if any, comply with international environmental and labour standards consistent with applicable law and regulations in the country of implementation of the Project, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties

In addition, I also undertake to adopt any environmental and social risk mitigation measures as defined in the environmental and social management plan or the notice of environmental and social impact issued by the Employer.

Dated this _____ day of _____ 20_____

Signature _____ in the capacity of _____

duly authorized to sign Tenders for and on behalf of

_____ [Name of Tenderer] of

_____ [Address of Tenderer]

_____ [Seal or Stamp of Tenderer]

[Initialled by representative, notarized and Seal or Stamp of Tenderer]

FORM RB 1

REPUBLIC OF KENYA

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO.....OF.....20.....

BETWEEN

.....APPLICANT

AND

.....RESPONDENT (Procuring Entity)

Request for review of the decision of the..... (Name of the Procuring Entity) ofdated the...day of20.....in the matter of Tender No.....of20...

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical address.....Fax No.....Tel. No.....Email, hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:-

- 1.
- 2.
- etc.

By this memorandum, the Applicant requests the Board for an order/orders that: -

- 1.
- 2.
- etc

SIGNED(Applicant)

Dated on.....day of/...20...

FOR OFFICIAL USE ONLY

Lodged with the Secretary Public Procurement Administrative Review Board on day of20.....

SIGNED

Board Secretary

SELF-DECLARATION FORMS

Date _____ 2020

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

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

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of _____ (insert name of the Company) who is a Bidder in respect of:-

Tender No. _____

for: _____

(insert tender title/description) for _____ (insert name of the Procuring entity) and duly authorized and competent to make this statement.

2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.
3. THAT what is deposed to hereinabove is true to the best of my knowledge, information and belief.

Title

Signature

Date

(To be signed by representative, notarized and stamped)

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

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

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

Title

f
Signature

Date

(To be signed by authorized representative, notarized and stamped)

**SECTION VIII: SPECIFICATIONS, DRAWINGS AND BILLS OF
QUANTITIES**

CONTENTS:

SECTION VIII: SPECIFICATIONS, DRAWINGS AND BILLS OF QUANTITIES	46
BILL 01: PRELIMINARY AND GENERAL ITEMS	49
01-50-001 MOBILIZATION AND ESTABLISHMENT OF THE SITE.....	49
01-60-001 CONTRACT SUPERVISION.....	49
01-60-002 CLEARANCE ON COMPLETION.....	49
01-60-004 QUALITY CONTROL TESTS.....	50
01-60-005 PUBLICITY SIGN BOARDS.....	50
01-60-007 PROVISION OF SITE SANITATION FACILITIES.....	51
BILL 03: SETTING OUT	52
03-50-001: SETTING OUT THE HORIZONTAL ALIGNMENT.....	52
BILL 04: SITE CLEARANCE	53
04-50-003 BUSH CLEARING (HEAVY).....	53
BILL 05: EARTHWORKS	55
05-50-002: EXCAVATION, SPREAD AND COMPACT IN SOFT MATERIAL (SIDE DRAINS).....	55
05-50-003 EXCAVATION, SPREAD AND COMPACT IN HARD MATERIAL (SIDE DRAINS).....	56
05-50-006 FILL IN SOFT MATERIAL AND COMPACT.	56
05-50-007 FILL IN HARD MATERIAL AND COMPACT.	56
05-50-008 CUT TO SPOIL IN SOFT MATERIAL.	56
BILL 07: EXCAVATION AND FILLING FOR STRUCTURES	57
07-50-001 EXCAVATION FOR DRAINAGE STRUCTURES – SOFT MATERIAL.....	57
07-50-006 SELECTED GRANULAR FILL MATERIAL.....	57
07-50-007 CUT TO FILL IN SOFT MATERIAL	57
BILL 08: CULVERT AND DRAINAGE WORKS	58
08-60-009: CULVERT CLEANING (FULLY BLOCKED): 900MM DIA	58
08-60-027 SUPPLY AND INSTALLATION OF CONCRETE PIPE CULVERTS-900 MM WITH SURROUNDS.....	58
08-60-036 PROVIDE, COMPACT CLASS 20/25 CONCRETE.....	59
08-60-037 PROVIDE AND PLACE A142 FABRIC MESH REINFORCEMENT	59
08-60-045A CONCRETE HEADWALL TYPE 4.....	60
08-70-001: STONE PITCHING.....	61
EA 61	
08-70-004: GABION INSTALLATION	62
08-70-005: ROCK FILL TO GABIONS.....	62
EB 63	
BILL 10: GRADING AND GRAVELLING	64
10-50-001: HEAVY GRADING WITHOUT WATERING AND COMPACTION.....	65
10-50-003: CARRIAGEWAY GRADING - LIGHT GRADING.....	66
10-60-001: PROVIDE GRAVEL WEARING COURSE (EXCAVATION, FREE HAUL, SPREADING AND COMPACTION OF GRAVEL)	66
BILL 12: NATURAL MATERIAL BASES	69
12-50-001 HAND PACKED STONE	69
BILL 17: CONCRETE WORKS	70
17-60-001: PROVIDE, PLACE AND COMPACT CLASS 15/20 CONCRETE FOR BLINDING	70
17-60-002: PROVIDE, PLACE AND COMPACT CLASS 25/20 CONCRETE.....	70

17-60-003:	VERTICAL FORMWORK CLASS F2 FINISH.....	70
17-60-004:	HORIZONTAL FORMWORK CLASS F2 FINISH	70
17-60-005:	PROVIDE, CUT, BEND AND FIX INTO POSITION HIGH YIELD REINFORCEMENT BAR TO BS 44461 AS DIRECTED AND AS SHOWN ON THE DRAWING	70
17-70-001:	DRIFT CONSTRUCTION BY CONTRACT	70
17-70-003:	CONCRETE ROAD SECTION	70
BILL 20:	ROAD FURNITURE	72
20-50-010:	GUARD RAIL INSTALLATION.....	72
BILL 21	MISCELLANEOUS BRIDGE/DRIFT WORKS	72
21-60-006:	GUARDRAILS TO BRIDGES	72
21-60-008:	WEEP HOLES	72
BILL 22:	DAYWORKS	73
BILL 25:	HIV/AIDS AWARENESS AND PREVENTION CAMPAIGN	74
25-50-001	HIV / AIDS AWARENESS AND PREVENTION CAMPAIGN	74
25-50-002	SOIL EROSION MITIGATION MEASURES.....	74
25-50-003	BARAZA'S FOR CROSS-CUTTING ISSUES	74
PREAMBLE TO BILLS OF QUANTITIES		98

BILL 01: PRELIMINARY AND GENERAL ITEMS

Scope:

This bill comprises those items that are required at the Commencement and Completion of the Works or that are Provisional Items applicable for the duration of the Works.

01-50- 001 Mobilization and Establishment of the Site

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

The Contractor shall ensure that all possible means of protection are given to the labour force at all times. Such protection shall include provision of high visibility clothing or vests, goggles and masks for workers in potentially dangerous locations or dealing with potentially harmful materials. The Contractor shall also maintain first aid kits with a minimum of the following items:-

- Non Stick wound dressing
- Selection of plaster/band aids
- Crepe bandages
- Gauze and cotton wool
- Antiseptic solution (washing wounds)
- Antiseptic cream – Betadine, Burnol
- Pain killers Panadol, Disprin
- Anti diarrhoea – Immodium, Diadis, Charcoal
- Anti histamine – Piriton, Triludan
- Anti nausea – Stemetil
- Eye ointment
- Oral re-hydration sachets
- Surgical gloves

Measurement and Payment: NA

01-60- 001 Contract Supervision

Provisional sum available for the Engineer for expenses incurred for supervising the contract such as allowances, casual wages and transportation within the project area.

Measurement and Payment:

Provisional Sum: Payable by the Contractor to the Engineer through certification as directed by the Engineer. No mark up is included in this item.

Work Method: NA

01-60- 002 Clearance on Completion

On Completion of the Works, all temporary housing, 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 Lump Sum payment will be made upon approval by the Engineer that the Clearance has been satisfactorily carried out.

Work Method: NA

01-60-004 Quality Control Tests

The Engineer may instruct the Contractor during the progress of the Works to carry out quality control tests to check materials and standards of workmanship, against the Specifications.

Where such tests indicate defective standards the Engineer shall instruct the Contractor to rectify the defects to the Engineer's satisfaction and at the Contractor's expense.

The Engineer shall include a Provisional Sum for this item to be expended only as and when the Contractor is instructed to carry out tests at approved material testing laboratories.

Measurement and Payment

Reimbursable item based on actual costs incurred by the contractor including sampling, transportation and testing.

Work Method: NA

01-60-005 Publicity Sign Boards

The Contractor shall provide Sign Boards as specified on the Drawings or as directed by the Engineer. The Sign Boards shall be placed at the beginning and end of the road or road bill covered by this Contract.

Sign Boards shall be maintained for the duration of the Works, and removed on completion.

Quality Control

The Engineer shall check that Sign Boards have been erected in accordance with Drawings and Specifications.

Measurement: Number

The unit of measurement shall be number of Sign Boards erected

Payment

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

Work Method: NA

01-60-007 Provision of site sanitation facilities

The Contractor shall provide sanitation facilities on site for workers at a reasonable distance from all work locations, for the duration of the Works. This can be in the form of shallow pit latrines that are appropriately covered. All shallow pit latrines shall be filled in after the end of use.

Quality Control

The Engineer shall check regularly that adequate sanitation facilities are available throughout the Site.

Measurement and Payment

A Lump Sum shall be paid on a Monthly basis upon the approval of the Engineer that adequate sanitation facilities have been provided.

Work Method: **LB**

BILL 03: SETTING OUT

Scope

This bill covers the activities required in the re-establishment of the horizontal alignment of the road including setting out the centre line, cross section widths, drains and structures.

03-50-001: Setting Out the Horizontal Alignment

The Contractor shall set out the centreline to follow the existing road alignment unless instructed otherwise by the Engineer.

The minimum standards as shown in Table 2.1 shall apply.

Table 2.1 Alignment Standards

Standard	Flat and Rolling Terrain	Hilly Terrain
<i>Horizontal Curves</i>		
Desirable Minimum radius	100m	50m

The cross section details of the road shall be as shown on the Drawing or as directed by the Engineer.

Horizontal setting out shall be done for the approved work sections at a time but not for the entire road.

Work Method: **LB**

Quality Control

- Centreline pegs shall be set at 10m intervals on straight sections and 5m on curves
- Chainage or reference pegs shall be set out and marked at 20m intervals and located at one metre outside the cleared width and on both sides of the road.
- Cross section widths shall be checked at 10m intervals and shall have maximum tolerances of $\pm 25\text{mm}$

Measurement Unit: **m**

The measurement shall be the linear metres of the road set out.

Payment:

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

BILL 04: SITE CLEARANCE

Scope

This bill covers the clearance of bushes, shrubs, grasses, trees, stumps, boulders, stripping and grubbing of the topsoil, removal of anthills and other unsuitable materials for the specified widths of the road, quarry and borrow areas. The distinction between light and heavy bush shall be decided by the Engineer.

The minimum site clearing widths for each of the activities shall be as shown in Table 4.1

Table 4.1: Site Clearing Widths

<i>Road Category</i>	<i>Running Surface</i>	<i>Stripping and Grubbing</i>	<i>Trees, Stumps, Boulders</i>	<i>Bush Clearing</i>
A/B/C + Secondary Roads	6.0 m	10.6 m	10.6 m	14.0 m
D/E + Minor Roads	5.4 m	10.0 m	10.0 m	13.0 m
RAR Roads	4.5 m	7.9 m	8.0 m	11.0 m
Minor / RAR roads with insufficient widths or Temporary sections	3.5 m	6.9 m	7.0 m	9.0 m

04-50-003 Bush Clearing (Heavy)

Where the Engineer designates an area as Heavy Bush (based on the undergrowth density) the Contractor shall clear all vegetation including small trees, shrubs and undergrowth, **and their root systems**, and shall salvage any re-useable timber or other material by cutting into logs and stacking. Other cleared material shall be collected and disposed of off-site as directed by the Engineer.

This activity shall be carried out as either Machine Based or as Labour Based as defined in the Bills of Quantity or as instructed by the Engineer.

Work Method: **LB or MB**

Quality Control

The Engineer shall check the cleared widths at 50 metre intervals

Measurement Unit: m²

The measurement shall be the area cleared to the specified width over the length as instructed by the Engineer.

Payment:

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

BILL 05: EARTHWORKS

This bill covers the excavation of soil and the placing, watering and compaction of hard and soft material to form the road formation.

05-50-002: Excavation, spread and compact in soft material (side drains)

The Contractor shall excavate side drains to the profiles shown on the Drawings or as directed by the Engineer.

Soft material in this case is defined as any material which is not hard or rock in which the average output is more than 1.5 m³ per PD.

The material from the excavations shall be placed on the carriageway, spread and compacted. Where additional material is required to achieve the required camber, the widths of the side drains may be increased, with the approval of the Engineer.

The fill layers to be compacted shall not exceed 150mm loose depth.

Compaction of the fill material shall be carried out from the edges to the centre by overlapping passes of the compaction equipment. The number of passes shall be as directed by the Engineer dependent upon the equipment used and the material being compacted. Unless otherwise instructed the moisture content of the material shall be within $\pm 2\%$ of optimum. Where additional moisture is required water shall be applied in an even manner such that no longitudinal or transverse flow occurs.

Locations of the side drains shall be as shown on the Drawings or as directed by the Engineer, and the Contractor shall use the appropriate ditch template to control the excavations

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

Work method: **LB - MB**

Quality Control

- The dimensions of the side drains shall be checked at 50m intervals and shall have a tolerance of $\pm 50\text{mm}$
- The longitudinal profile of the side drains shall be checked at 30m intervals and shall have a tolerance of $\pm 50\text{mm}$.
- *Compaction shall show no movement of material under the roller – minimum of 6 passes.*
- *Compaction test standard shall be 95% MDD (AASHTO T99)*

Measurement Unit m³

Measurement shall be the volume of material excavated to form the side drains, and deposited for camber formation.

Payment

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

05-50-003 Excavation, spread and compact in hard material (side drains)

Where, in the opinion of the Engineer, the material to be excavated to form the side drains may be classified as hard (not rock) the Contractor shall carry out the excavation in accordance with 04-50-003 and shall be compensated under this item.

Hard material in this case is defined as hard gravel, dry black cotton soil, soil with high percentage of stones or other material in which the output is less than 1.5 m³ per PD.

This activity shall be carried out either as Machine Based, Labour Based or a mixture of the two as defined in the Bills of Quantity or as instructed by the Engineer.

Work Method: **LB, MB, LB-MB**

Quality Control:

The Engineer shall measure the volume of the excavation classified as Hard material

Measurement Unit: m³

The measurement shall be the volume of material excavated and deposited to form the camber

Payment:

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

05-50-006 Fill in soft material and compact.

05-50-007 Fill in hard material and compact.

05-50-008 Cut to spoil in soft material.

These activities should be done in accordance with Bill 5, sub clauses 5.01 to 5.17 in the Standard Specifications for Roads and Bridges 1986.

BILL 07: EXCAVATION AND FILLING FOR STRUCTURES

This bill covers all Works in connection with the excavation for concrete pipe culverts; inlet and outlet structures; drifts and drainage protection Works;

07-50-001 Excavation for Drainage Structures – Soft Material

The Contractor shall excavate trenches for culverts; foundations for head walls, wing walls; inlet and outlet aprons and other drainage structures to the dimensions and levels shown on the Drawings or as directed by the Engineer. The excavations shall be kept free of water and shall be compacted with hand rammers of not less than 5kg.

The Engineer shall approve all excavations before the Contractor shall be permitted to proceed with the construction.

The Contractor shall take all necessary precautions to safeguard the stability and safety of the excavations.

The Contractor shall apply **Labour** methods to carry out this item

Work Method **LB**

Quality Control

- The dimensions of the excavations shall have a tolerance of $\pm 50\text{mm}$
- The invert levels shall have a tolerance of $\pm 50\text{mm}$
- The trench bottom gradients shall have a tolerance of $\pm 20\text{mm}$ over the length of the trench

Measurement Unit m^3

The measurement shall be volume of material excavated measured net according to the Drawings.

Payment

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

07-50-006 Selected granular fill material

07-50-007 Cut to fill in soft material

These activities should be done in accordance with Bill 7, sub clauses 7.01 to 7.13 in the Standard Specifications for Roads and Bridges 1986.

BILL 08: CULVERT AND DRAINAGE WORKS

This bill covers all Works in connection with the installation of concrete pipe culverts; inlet and outlet structures; drifts and drainage protection Works; and the construction of Scour Checks

08-60-009: Culvert Cleaning (Fully blocked): 900mm dia

This activity involves the cleaning of culverts of specified sizes including pipe barrels, the outlet/inlet structures, and the outlet drains, keeping them free of all debris, weed, silt and any obstruction to ensure free passage of water at all times. The debris shall be deposited in approved spoil dumps as directed by the Engineer

Fully blocked culvert shall be those with greater than half of the barrel blocked.

Correct widths and slopes of the outlet drains shall be maintained. The gradient of the outlet drain shall be not less than 2 %.

All broken culvert barrels discovered in the course of carrying out this activity shall be reported to the Engineer.

This activity should be carried out before the onset of the rains, or as directed by the Engineer.

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

Work Method: **LB**

Quality Control

The culverts shall be checked as free from debris, to the satisfaction of the Engineer.

Measurement Unit: m

The measurement shall be the length of culvert, including the outlet drain cleaned.

Payment

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

08-60-027 Supply and Installation of Concrete Pipe Culverts-900 mm with surrounds

The Contractor shall supply, lay and join concrete pipes to form culverts, including the concrete bedding; haunching or surrounds; and backfilling, in accordance with the Drawings for the Type and diameter specified in the Contract or directed by the Engineer.

The pipes shall be of Class 20/20 concrete, at least 28 days cured, and manufactured on site or procured from a supplier approved by the Engineer and preferably ogee

jointed. The pipes shall be laid on a bedding of Class 15/20 concrete of dimensions as shown on the Drawings and jointed with cement mortar 1:4.

The culvert gradient including the outlet shall be a minimum 2%.

The pipes shall be surrounded with Class 15/20 concrete to the dimensions shown on the Drawings or as directed by the Engineer.

Backfilling shall be carried with approved material and compacted in layers not exceeding 150 mm loose depth and placed evenly on each side of the pipe. Ramps shall be shaped to achieve a minimum overfill of 75% of the pipe diameter, and shall be tapered back on the carriageway to provide a gradual approach, as directed by the Engineer.

If the Contractor wishes to construct culverts on site, using inflatable or collapsible forms the Engineer's approval shall first be sought for the proposed working method.

On completion the inside of the culvert shall be smooth, without displaced joints or other obstructions and true to line and level.

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

Work Method: **LM-MB**

Quality Control

- Concrete quality shall be checked for cracks, honey combing, and other defects.
- Before the pipes are laid, the gradient of the concrete bedding shall be checked and shall not be less than 2%
- The joints shall be checked to see that they have been properly made.

Measurement Unit: m

The measurement shall be in linear metres of the installed Type and size of culvert specified, measured net according to the Drawings.

Payment

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

08-60-036 Provide, compact class 20/25 concrete

08-60-037 Provide and place A142 fabric mesh reinforcement

These activities should be done in accordance with Bill 8, sub clauses 8.01 to 8.20 in the Standard Specifications for Roads and Bridges 1986.

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

Work Method: **LM-MB**

Quality Control

- The workability and mix of concrete for the classes 15/20 and 20/25 shall be checked using the slump test and shall have a slump limit as directed by the Engineer.
- The laying and joining of the culverts shall be subject to the approval of the engineer.

Measurement Unit: m

The measurement shall be the length of culvert laid.

Payment

The unit rate shall be the full compensation for labour, tools, materials, formwork, equipment and other incidentals that may be required in carrying out the work.

08-60-045a Concrete Headwall Type 4

The Contractor shall construct inlet and outlet structures for culverts in concrete to the dimensions and levels shown on the Drawings (Type 4) as directed by the Engineer.

Concrete shall be Class 20/20 unless otherwise specified. The formwork for the walls shall be erected on the concrete foundations, to the correct dimensions, and shall be approved by the Engineer before concrete is poured. Concrete shall be poured in a single lift and the top surface shall be kept moist for 3 days. Formwork may be struck after 2 days or as directed by the Engineer.

The Contractor shall use a concrete vibrator or other means approved by the Engineer to ensure full compaction of the concrete.

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

Work Method: **LM-MB**

Quality Control

- The dimensions of the structures shall have a maximum tolerance of + 20mm / - 10mm
- The workability and mix of concrete shall be checked using the slump test and shall have a slump limit as directed by the Engineer. The frequency of testing shall be determined by the Engineer
- The concrete shall be checked for cracks, honey combing and other defects at the time of striking the formwork.

Measurement Unit: m³

The measurement shall be the volume of concrete in the completed structure, measured net in accordance with the Drawings.

Payment

The unit rate shall be the full compensation for labour, tools, materials, formwork, equipment and other incidentals that may be required in carrying out the work.

08-70-001: Stone Pitching

The Contractor shall lay stone pitching at locations shown on the Drawings or as directed by the Engineer, which shall include levelling the area to be covered with stone pitching, collecting stones, laying stones, applying mortar to the joints and constructing weep holes, if required.

The area to be covered with stone pitching shall be trimmed to the level and slope shown on the Drawings or as directed by the Engineer. The prepared surface shall be firm and well compacted, with hand rammers.

The stones shall have minimum dimensions of 150mm and maximum 300mm and shall be set on the flat side and securely bedded, with the largest dimensions at right angles to the flow of water, in an interlocking pattern so as to leave only a minimum of voids between the stones which shall be filled with suitably shaped and tightly wedged spalls. The top of the pitching shall be finished flush with the adjacent material.

The stones shall be placed in full contact with the surface and bedded into cement mortar 1:4 with a minimum thickness of 100 mm. The mortar shall be worked into the pitching so that the voids between the stones are filled to the full depth of the pitching. The mortar shall be finished flush with the surface of the stones.

Weep holes shall be provided to stone pitching on slopes as directed by the Engineer.

The surface of the stone pitching shall be protected from direct sunshine and kept moist for 2 days.

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

Work Method: **LB**

Quality Control

- The quality of pitching shall be checked for gaps and voids.
- The dimensions of the area of stone pitching shall have a tolerance of $\pm 100\text{mm}$

Measurement Unit: m^2

The measurement shall be the total area of pitching calculated as the net area, measured on the slope.

Payment

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

08-70-004: Gabion Installation

The Contractor shall provide and install Gabions as retaining walls and anti-erosion structures at locations shown on the Drawings or as directed by the Engineer.

Gabions shall include mattresses and boxes and for purposes of construction, measurement and payment, no distinction shall be made between them.

Gabions shall be 'Maccaferi' boxes or 'Reno' mattresses or equivalent approved by the Engineer.

The surfaces on which the Gabions are to be laid prior to being filled with rock shall be levelled to the depths and dimensions shown on the Drawings or as directed by the Engineer.

Gabion boxes shall be tied together with 3 mm galvanised binding wire securing all edges at 150mm intervals.

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

Work Method: **LB**

Quality Control

The placing and tying of the Gabions shall be approved by the Engineer before filling commences.

Measurement Unit: No

The measurement shall be the number of Gabion boxes installed.

Payment

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

08-70-005: Rock fill to Gabions

The Contractor shall provide selected rock, crushed if necessary, and carry out the packing and compacting of the rock inside the Gabion boxes.

The boxes shall be filled in layers from the sides towards the middle in an interlocking stone matrix to prevent deformation and bulging. The interior and top layers of the boxes shall be hand packed with smaller stone to form a tightly compact structure and rammed in place. Care shall be taken to ensure that each layer of boxes is filled evenly and to a level surface before the next course of boxes is placed.

The Contractor shall use a combination of **Labour** and transport **Equipment** to carry out this activity.

Work method: **LB-MB**

Quality Control

The filling and compaction of the stones in the Gabion boxes shall be approved by the Engineer.

Measurement Unit m³

Rock fill to Gabions shall be the volume of Gabions filled.

Payment

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

BILL 10: GRADING AND GRAVELLING

Scope:

Grading covers the work of reinstating the road carriageway to the correct camber by removing the high points and filling gullies, corrugations, and wheel ruts to restore a smooth running surface.

Grading can either be done by labour (Manual Reshaping) or by Machine (Motorized grading or towed grading).

Manual reshaping is preferable where there is sufficient labour. For existing roads with side drains light manual reshaping should be used as defined in 10-50-004. Heavy manual reshaping should be used for roads that have deteriorated to such an extent that the drains and carriageway need to be re-instated. Heavy Manual Reshaping is defined under Bill 5 – Earth Works.

Light grading is carried out on good and fair roads as a maintenance activity while heavy grading is for re-establishing a road in poor or very poor condition.

Gravelling consists of the excavation; loading, hauling, dumping, spreading and compacting using approved equipment of gravel wearing course material on the formation of the road carriageway. Gravel shall include lateritic gravel, quartzitic gravel, calcareous gravel, decomposed rock, soft stone coral rag, clayey sand and crushed rock.

The material may be obtained from quarries, borrow pits or excavation in cuttings as directed by the Engineer. Gravel material shall conform to the requirement given in Table 10.1: Requirement for Gravel Wearing Course

GRADING REQUIREMENTS	
Sieve (mm)	% by Weight Passing
40	100
28	95 – 100
20	85 – 100
14	65 – 100
10	55 – 100
5	35 – 92
2	23 – 77
1	18 – 62
0.425	14 – 50
0.075	10 – 40

For "Quarry Waste" gravel stones of maximum dimension 80mm may be permitted

PLASTICITY INDEX REQUIREMENTS PI		
Zone	Min	Max
WET: Mean annual rainfall > 500mm	5	20
DRY: Mean annual Rainfall < 500mm	10	30

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

The Engineer shall approve quarries and the extent of their exploitation. The possible quarries shall be shown to the Contractor prior to commencement of the Works. The

Contractor shall be responsible for the acquisition of the quarry rights and shall conduct respective negotiations with landowners and affected communities.

Alternative sources of gravel material whose quality can be shown to be in compliance with the specification requirements may be used, with the approval of the Engineer. The Contractor is deemed to have included in his rates for the provision of the gravel material.

10-50-001: Heavy Grading without watering and compaction.

Heavy grading without watering and compaction shall only be done when there is sufficient moisture in the material and the material can be compacted by traffic.

The Contractor shall scarify the existing carriageway surface, cutting high spots and moving materials to fill potholes, corrugations and wheel ruts and reshape the surface to the specified camber, using a Motor grader unless otherwise directed by the Engineer. All loose rocks, roots and grasses shall be removed first and disposed of well clear of the drains.

Pegs 300 to 400mm long shall be placed at 20 m intervals to mark edge of the carriageway.

The material shall be graded toward the centre of the road starting from both edges until the specified camber is achieved. Suitable material from the side drains may be used as additional material. Any further material needed to achieve the correct camber shall be from an approved source.

No grading shall be carried out in dry conditions.

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

Work Method: **MB**

Quality Control

- The width of the carriageway shall be checked at every 50m intervals and have a tolerance of + 50mm or -20mm.
- The camber shall be checked with a camber board at 25m intervals and shall have a tolerance of $\pm 1\%$

Measurement Unit: m^2

The measurement shall be the area of carriageway graded, measured net according to the specified width and measured length graded.

Payment

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

10-50- 003: Carriageway Grading - Light Grading

Light grading shall only be done when there is sufficient moisture in the material. The Contractor shall grade the carriageway to control roughness and corrugations using either a Towed or a Motor grader. The width of the carriageway shall be as specified for the Road Class.

Pegs 200 to 300mm long shall be placed at 20 m intervals to mark edge of the carriageway

The material shall be bladed toward the centre of the road, starting from both edges, to the specified camber. Where instructed by the Engineer, suitable materials from the side drains may be used to fill potholes and gullies in the carriageway. Any further material needed to re-form the camber shall be from an approved source. Compaction shall be achieved using the wheels of the equipment, tracked evenly over the full surface, or by other approved means.

No grading shall be carried out in dry conditions.

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

Work Method: **MB**

Quality Control

- The width of the carriageway shall be checked at every 50m intervals and have a tolerance of +50mm or -20mm
- The camber shall be checked with a camber board at 25m intervals and shall have a tolerance of $\pm 1\%$
- Longitudinal levels shall be checked with a straight edge of minimum 2.7 m length. Maximum tolerance of ± 10 mm.

Measurement Unit: m²

The measurement shall be the area of carriageway graded, measured net according to the specified width and measured length graded.

Payment

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

10-60-001: Provide Gravel Wearing Course (Excavation, Free haul, spreading and Compaction of Gravel)

Excavation of Gravel

Gravel shall be excavated from quarries approved by the Engineer, and the Contractor shall inform the Engineer if the quality/availability of the gravel changes during the course of excavation.

Stones and boulders with one dimension greater than 80mm shall be removed from the excavated gravel and deposited outside the quarry at locations approved by the Engineer. Such stones and boulders may be reused in other parts of Works with the approval of the Engineer.

Excavation and loading shall normally be by labour unless, at the request of the Contractor, the Engineer allows the use of equipment.

The Contractor shall use **Labour** and/or **Equipment** to carry out this work, as directed by the Engineer.

Work Method: LB or MB

Quality Control:

- Oversize stones and boulders shall not be loaded for haulage to the road.
- Areas containing deleterious material shall not be excavated.

Free haul, spreading and Compaction of Gravel

Free haul involves the transportation of gravel material for the first 1.5 km from the quarry. The Contractor shall spread and compact gravel material, in a manner to ensure a uniform thickness of the layer across the full width of the carriageway and shaped to the specified camber. Spreading also includes the removal of any oversized stones or boulders, which cannot be broken down to the required size, to spoil dumps. Gravel shall be spread within 24 hours of off-loading.

Compaction of the gravel material shall be carried out from the carriageway edges to the centerline by overlapping passes of the compaction equipment. The number of passes shall be as directed by the Engineer dependent upon the equipment used and the material being compacted. Unless otherwise instructed the moisture content of the material shall be within $\pm 2\%$ of optimum

Where additional moisture is required water shall be applied in an even manner and the rate of application shall be such that no transverse or longitudinal flows occur.

The Engineer may instruct the Contractor to carry out density tests on the compacted material to ensure that an acceptable standard has been achieved.

The Contractor shall use Equipment for haulage and **Labour** for spreading unless the Engineer instructs otherwise.

Work Method: LB-MB

Quality Control:

- The gravel surface width shall be checked at 100m intervals and shall have a tolerance of $\pm 50\text{mm}$

- Trial holes shall be dug as directed by the Engineer to check the gravel thickness and shall have a tolerance of + 5mm / - 0mm
- The camber shall be checked at 50m intervals and the maximum tolerance shall be ± 1 %
- The longitudinal profile shall be checked after the compaction of each load to ensure a smooth surface with no corrugations or depressions, tolerance of ± 10 mm.
- Compaction shall show no movement of material under the roller, minimum of 6 passes.
- Compaction test standard shall be 95% MDD (AASHTO T180)

Measurement Unit: m^3

The measurement shall be the volume of compacted gravel surfacing measured net according to the Drawings and shall include the excavation and the 1.5km 'free' haul distance

Payment

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

BILL 12: NATURAL MATERIAL BASES

12-50-001 Hand Packed Stone

The Contractor shall construct the hand packed stone base on the shaped and compacted road formation which has been approved by the Engineer.

Pegs shall be placed at 5 metre centres at the edge of the carriageway with the tops of the pegs at the desired finished road level.

A kerb of larger stones (30-40 cms) shall be placed in an edge trench so that the tops of the stones correspond to the finished road surface level. The trench shall be backfilled and compacted to secure the kerb stones in place. Stones 15-20 cms maximum dimension shall be placed tightly together on the road formation between the kerbs with the greater dimension vertical, and the tops approximately at the finished surface level.

The gaps between the base stones shall then be filled with smaller stones and hammered into place. Angular chippings from the breaking of larger stones, and other smaller stones shall be wedged into the gaps to form a close matrix.

The surface shall then be blinded to finished road profile level with gravel, fine stones, sand or clay sand mix, and compacted until no movement is observed.

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

Work Method **LB - MB**

Quality Control

The passage of the compaction equipment shall show no movement within the paving. The finished surface shall be dense and firm.

Measurement Unit: m³

The measurement shall be the volume of paving in place measured net according to the Drawings.

Payment

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

BILL 17: Concrete Works

- 17-60-001: Provide, place and compact class 15/20 concrete for blinding**
17-60-002: Provide, place and compact class 25/20 concrete
17-60-003: Vertical formwork class F2 finish
17-60-004: Horizontal formwork class F2 finish
17-60-005: Provide, cut, bend and fix into position high yield reinforcement bar to BS 44461 as directed and as shown on the drawing

These activities should be done in accordance with Bill 17 sub section 17.01 to 17.41 of the Standard Specifications for Roads and Bridges 1986.

17-70-001: Drift Construction by contract

The activities for these items will be defined in a separate specific document and only summarised under these item numbers.

17-70-003: Concrete Road Section

The Contractor shall construct the concrete road carriageway on the prepared, shaped and compacted road formation as approved by the Engineer. Concrete shall be class 20/20 and may be batched by volume, but shall be mixed in a mechanical mixer. The mix shall be as shown below.

Concrete Class	Nominal Mix by Volume	Batch with 1 bag Cement		
		No. of boxes		
		Fine	Coarse	Yield (approx)
20/20	1:2:4 (20mm max aggregate)	2	4	0.16m ³

The water added shall be the minimum necessary to give sufficient workability for efficient consolidation of the concrete. For concrete placed by hand this shall be 23-27 litres per bag of cement. For mechanical mixing and compacting (poker vibrator) the water content shall be reduced to 20 litres per bag of cement.

The concrete shall be placed in formwork which is clean, smooth faced and secure from movement and leakage to the full depth of the carriageway (150mm) in clearly marked out bays. Steel reinforcing mesh mats (6mm) shall be laid at a depth 50mm below the finished surface as the concrete is being poured. Compaction of the concrete shall be by hand ramming or poker vibrator. The surface shall be tamped with a timber tamping bar to produce a uniform, transverse ridged surface.

Concrete pours shall normally be over half the carriageway width and in lengths between construction joints as directed by the Engineer, of 10-15 metres. Contraction joints if required shall correspond with the construction joints. Where directed by the Engineer expansion joints shall be formed in positions and in accordance with the details provided by the Engineer.

The surface of the concrete shall be covered and kept moist for at least 4 days to allow adequate curing. The Contractor shall make cubes for testing as directed by the Engineer.

All materials used for concrete production and the Contractor's working method shall be approved by the Engineer before concreting is permitted.

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

Work Method **LB - MB**

Quality Control

Slump test shall be to the standard specified by the Engineer in the range of 25-100mm.
Cube strength shall be 27.5 N/mm² at 28 days on an average of 4 cubes

Measurement Unit: m³

The measurement shall be the volume of concrete measured net according to the Drawings

Payment

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

BILL 20: ROAD FURNITURE

Scope:

This bill comprises those items of Road Furniture to be erected and maintained as aids to road safety, including traffic signs and guardrails.

20-50-010: Guard Rail Installation

The Contractor shall erect guardrails at locations shown on the Drawings or as directed by the Engineer. The guardrails shall comply with the requirements of the Road Authority and shall be erected on hard wood or treated timber posts of top diameter not less than 150mm.

Posts shall be drilled and shaped as shown on the Drawings and provided with the necessary bolts, nuts, washers and spacer blocks.

Holes excavated for the timber posts shall be spaced to suit the standard length of guardrail supplied, and shall be of sufficient size to permit the proper setting of the posts and to allow room for backfilling and compacting. At least 1 metre of a post shall be embedded in the ground. The backfilling shall be with 12:1 soil cement mixture, or as otherwise directed by the Engineer, after the erected rails have been approved by the Engineer.

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

Work Method LB

Quality Control

The Engineer shall check the post and rail erection before final backfilling.

Measurement Unit: m

The measurement shall be the length of Guardrail erected.

Payment

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

BILL 21 MISCELLANEOUS BRIDGE/DRIFT WORKS

21-60-006: Guardrails to bridges

21-60-008: Weep holes

This activity should be done in accordance with Bill 21 sub section 21.01 to 21.08 of the Standard Specifications for Roads and Bridges 1986.

BILL 22: DAYWORKS

ITEMS 22-50-001 to 22-79-018 are for the Schedule of Rates. The Engineer will include the relevant items for each specific contract document.

A Provisional Sum shall be included in the Bills of Quantities to cover the payment of equipment, labour and materials for work instructed by the Engineer on a Dayworks basis.

The Contractor shall include prices for all items in the Schedule of Rates, in the Dayworks Bill, and shall carry out work using these rates only if directed by the Engineer.

Measurement and Payment

a. Equipment:

Payment for equipment shall only be made for the time each item of equipment is working. Idle time due to breakdown or incompleteness of the equipment shall not be paid. The rate of equipment shall include for the cost of the following:-

- i. Transport of the equipment to the site
- ii. Operators , drivers and assistants including their overtime
- iii. Fuels and lubricants
- iv. Maintenance, spare parts and all costs of repairs
- v. Depreciation, insurance, overheads and profits.

b. Labour

Payment shall only be made for the time each of worker working on the Dayworks as instructed by the Engineer. The rate for labour shall include the cost of,

- i. All wages, allowances and other payments due to the worker
- ii. Provision of small tools used on Dayworks activities by labourers and tradesmen.
- iii. Insurance, overheads and profit.

c. Materials

Payment shall only be made for materials instructed by the Engineer for use in Dayworks activities. The rate for materials shall include for the cost of provision of the material, transport to site, storage, handling, overheads and profits.

Schedule of Dayworks

The Engineer shall compile a Schedule of the Equipment, Labour and Materials which may apply to Dayworks activities, to be included in the Dayworks Bill.

BILL 25: HIV/AIDS AWARENESS AND PREVENTION CAMPAIGN

This BILL sets out the Contractor's obligations with regard to on-site HIV / AIDS awareness campaign and preventive measures that are to be instituted.

25-50-001 HIV / AIDS Awareness and Prevention Campaign

The Contractor shall institute an HIV / AIDS awareness and prevention campaign amongst his workers for the duration of the Contract. The awareness campaigns shall be carried out in consultation and guidance of Ministry of Public Health or Local service providers approved by the Ministry of Public Health.

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.

As part of the campaign the Contractor will be required to make condoms available to his workers.

Measurement Unit: month

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

Payment:

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

25-50-002 Soil Erosion Mitigation Measures

Soil Erosion problems must be identified and appropriate mitigation measures included during the preparation of the contract document. However the Engineer shall provide a Provisional Sum for Soil Erosion Mitigation Measures that were foreseen during the preparation of the document.

Measurement

A Provisional Sum shall be included in the Bill of Quantities for this item.

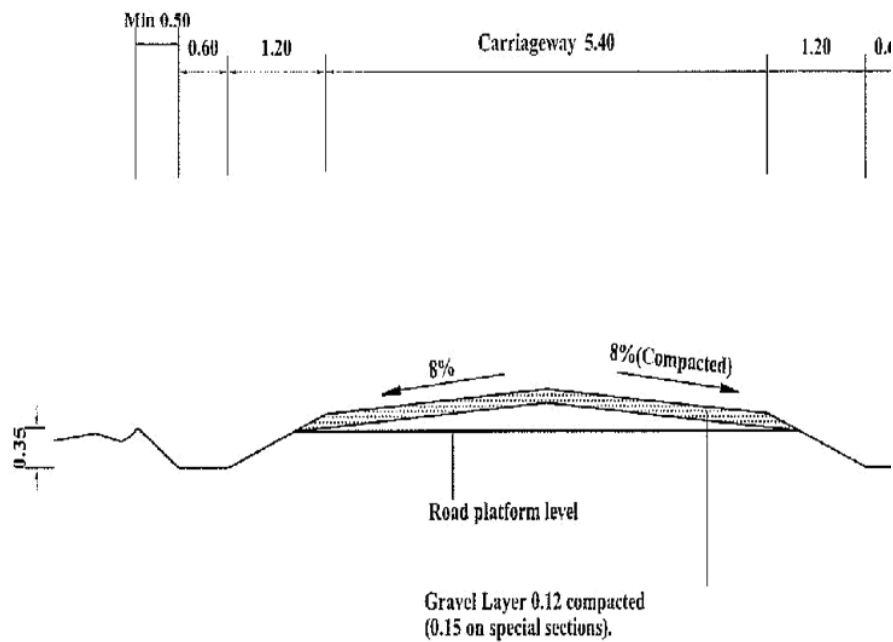
25-50-003 Baraza's for Cross-cutting Issues

The Contractor shall arrange and conduct meetings and/or training sessions for workers and staff on cross-cutting issues, including Community Participation, Environmental Mitigation, Gender Rights, HIV/AIDS, Workers Rights at times and locations directed by the Engineer.

Measurement

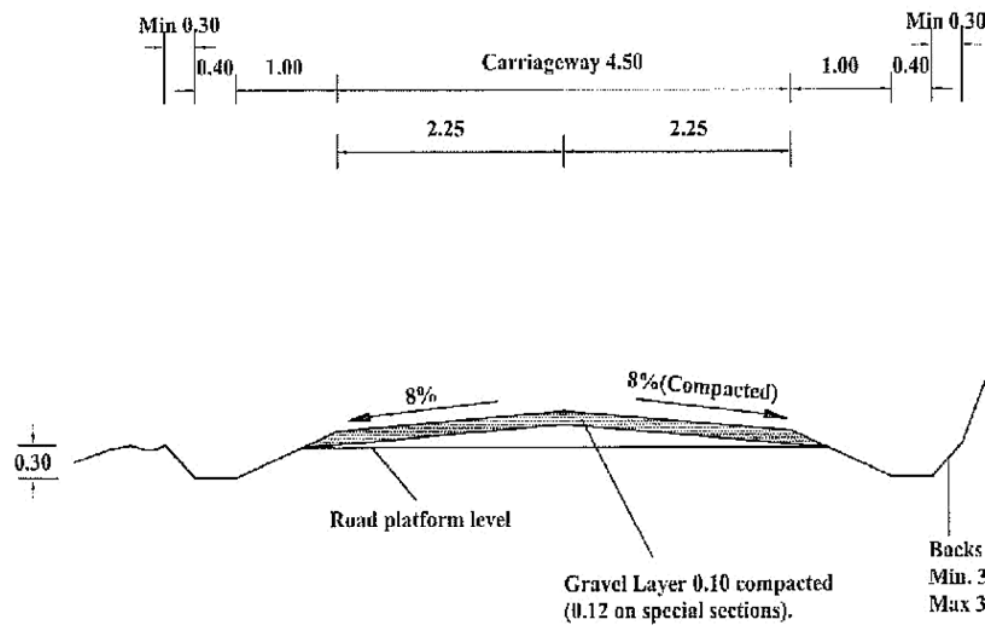
A Provisional Sum shall be included in the Bill of Quantities for this item payable on documented expenditure.

DRAWINGS



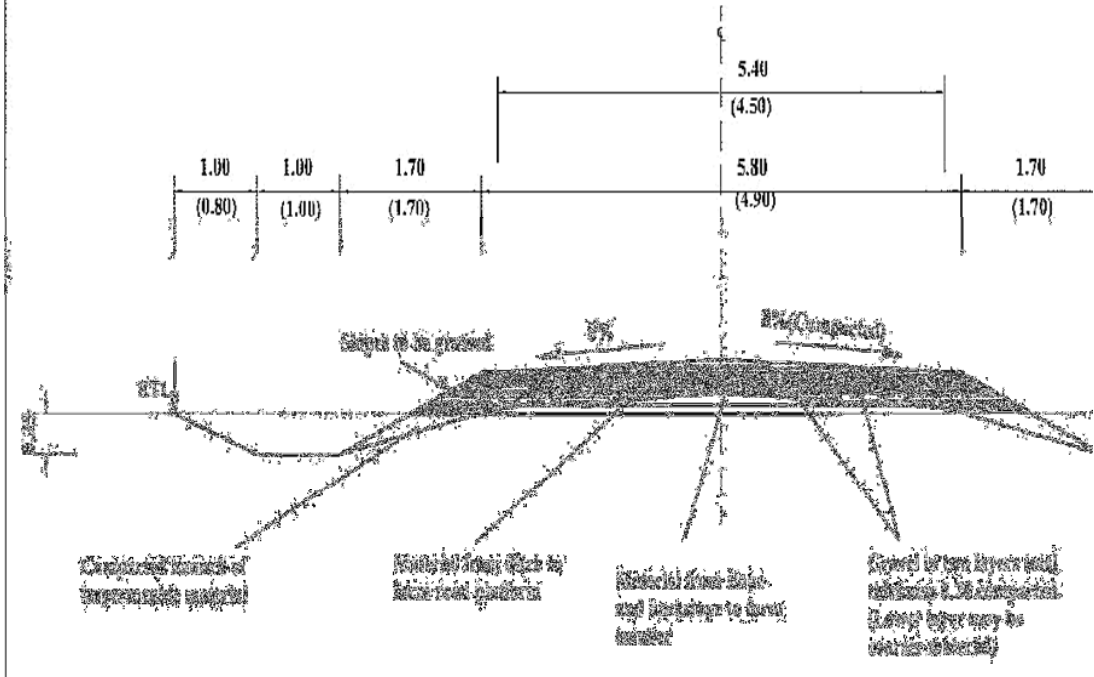
Notes:

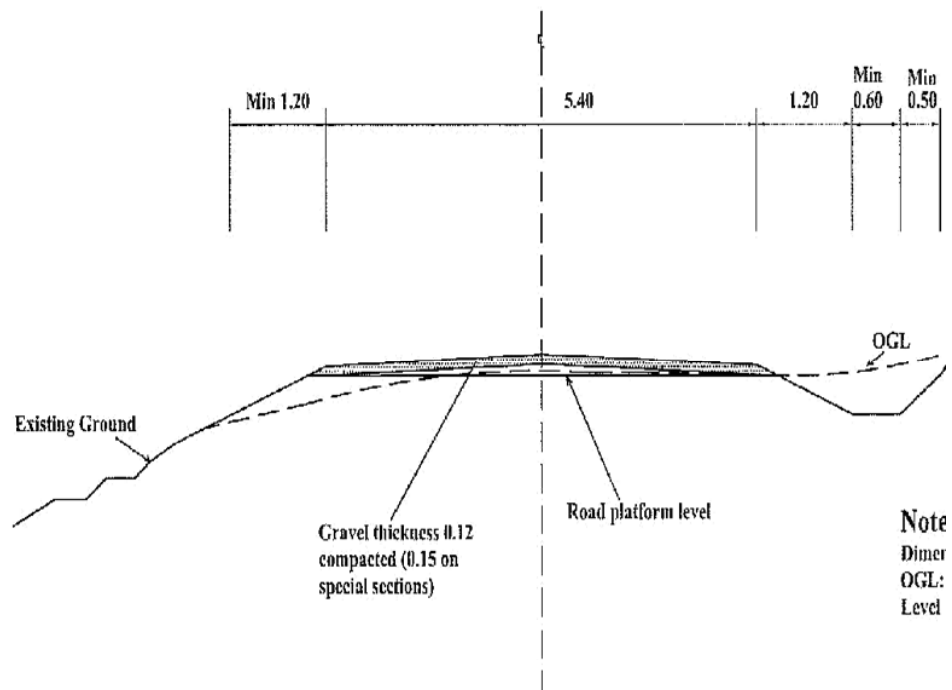
- 1.All dimensions in metres
- 2.Traffic levels of >200vpd may justify a carriageway width of 6.0m
- 3.Gravel thickness may be increased as directed by the Engineer

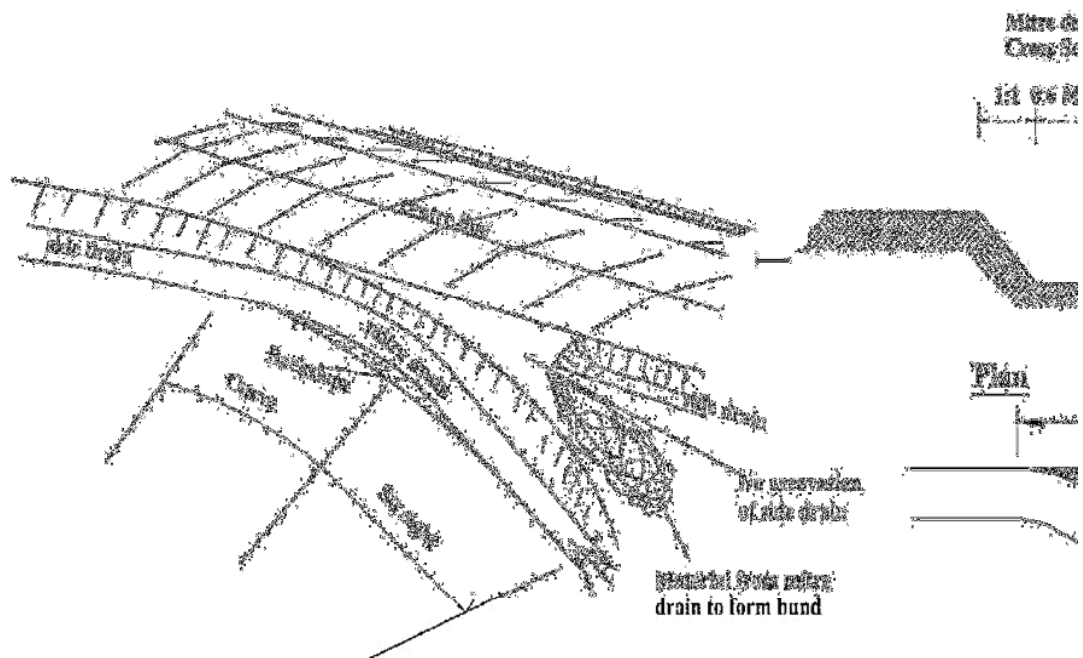


Notes:

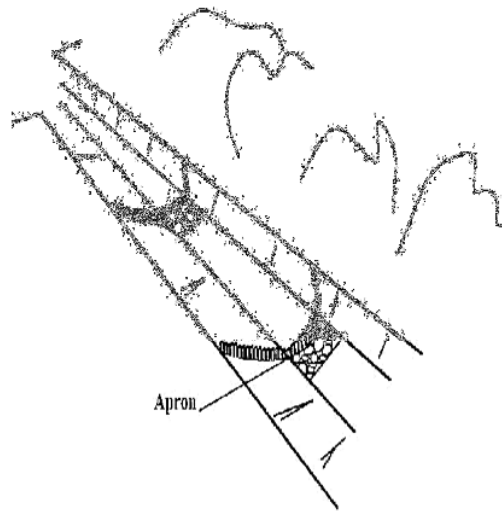
1. All dimensions in metres
2. Gravel thickness may be increased as directed by the Engineer



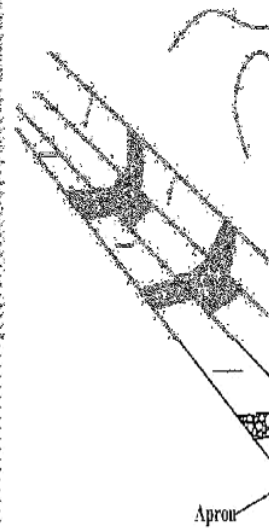




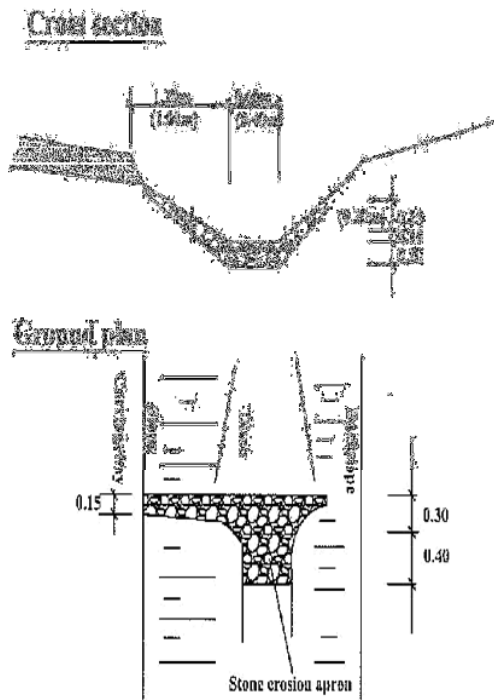
Scour checks made of wooden stakes



Scour checks made of stones

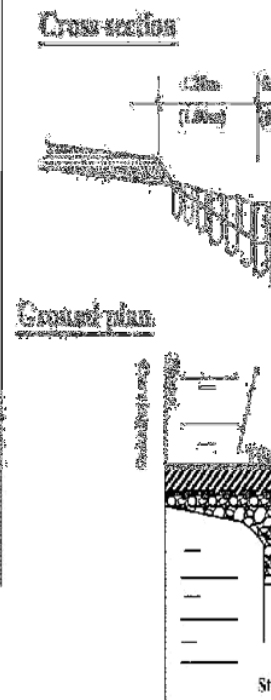


Scour checks made of stones



NOTE
1. Dimensions in metres

Scour checks made of stones

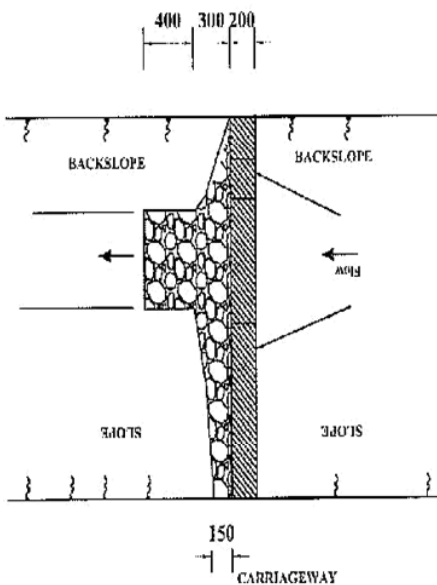


STONE WEIGHT: MIN 10KG
STAKE DIAMETER: MIN. 0.10



SECTION OF MASONRY SCOUR CHECK

Note
1. Dimensions in mm

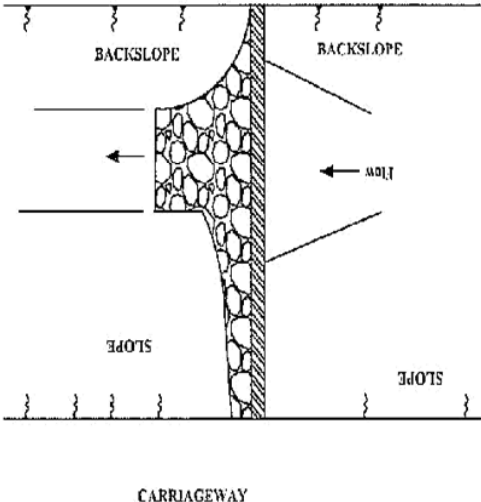


PLAN OF DRAIN WITH SCOUR CHECK

Cross-Section	Size in mm			Excav (m ³)	Lower side (m ³)	Apron stone pitching (m ³)
	Length	Width	Depth			
A	2400	700	550	0.22	0.25	0.18
B	2000	200	500	0.18	0.2	0.14

7

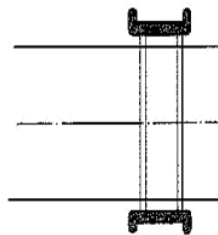
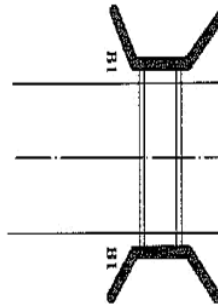
SECTION OF CONCRETE SCOUR CHECK



NOTE
1. Dimensions in mm

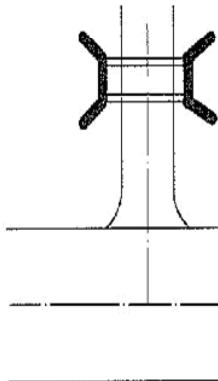
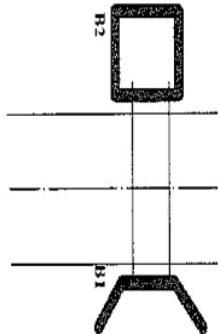
PLAN OF DRAIN WITH SCOUR CHECK

Cross- Section	Sizes in mm			Excav (m ³)	Concrete (m ³)	Apron stone pitching (m ³)
	Length	Width	Depth			
A	2400	100	550	0.13	0.15	0.18
B	2000	100	500	0.10	0.09	0.14



TYPE 2(ENTRY ONLY)

TYPE 4(ENTRY AND EXIT ON ACCESS)



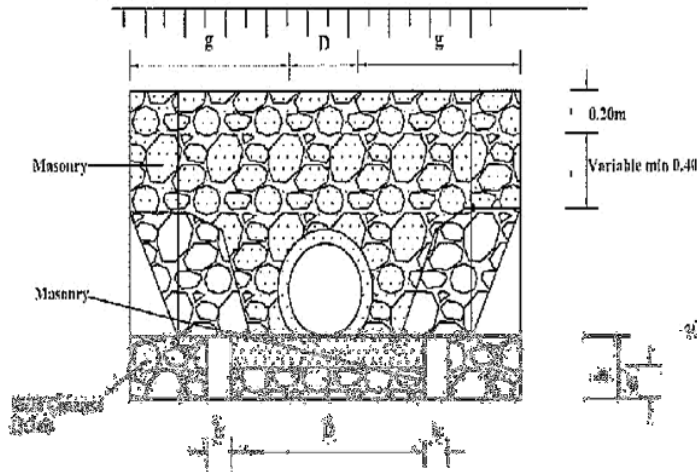
NOTE:
1. The code numbers specify the shape and function and the code letter denotes the material:
A =Concrete block
B =Stone masonry
C =Concrete

[illegible]

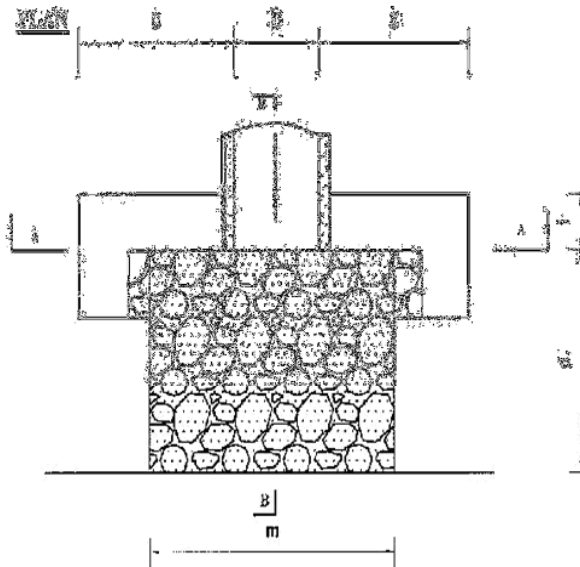
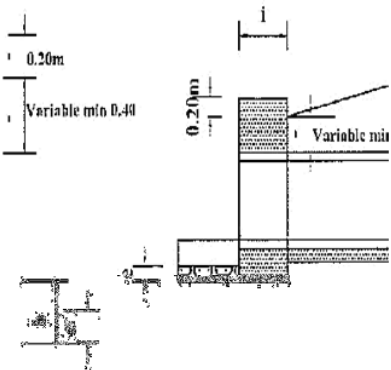
PIPE DIAMETER IN (M)	TYPE A CONCRETE BLOCKS			TY M/	
	UNIT	450	600		900
		45			
a FOUNDATION	m	0.30	0.30	0.30	0.4
b FOUNDATION	m	0.30	0.30	0.30	0.2
c FOUNDATION	m	1.10	1.10	1.40	1.2
d APRON	m	0.90	0.90	0.90	1.0
e APRON	m	0.20	0.20	0.20	0.1
f	m	0.40	0.40	0.40	0.2
g	m	0.40	0.40	0.40	0.2
h	m	0.40	0.40	0.40	0.2
i	m	0.40	0.40	0.40	0.2
j	m	0.40	0.40	0.40	0.2
k	m	0.40	0.40	0.40	0.2
l	m	0.40	0.40	0.40	0.2
m	m	0.40	0.40	0.40	0.2
n	m	0.40	0.40	0.40	0.2
o	m	0.40	0.40	0.40	0.2
p	m	0.40	0.40	0.40	0.2
q	m	0.40	0.40	0.40	0.2
r	m	0.40	0.40	0.40	0.2
s	m	0.40	0.40	0.40	0.2
t	m	0.40	0.40	0.40	0.2
u	m	0.40	0.40	0.40	0.2
v	m	0.40	0.40	0.40	0.2
w	m	0.40	0.40	0.40	0.2
x	m	0.40	0.40	0.40	0.2
y	m	0.40	0.40	0.40	0.2
z	m	0.40	0.40	0.40	0.2

Population:	n	0.0	0.1	0.2	0.3
HYPERVENTILATE	10	0.50	0.72	1.15	1.2
APRON (control)	10	0.24	0.24	0.30	0.2

SECTION A-A

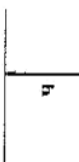


SECTION B-B



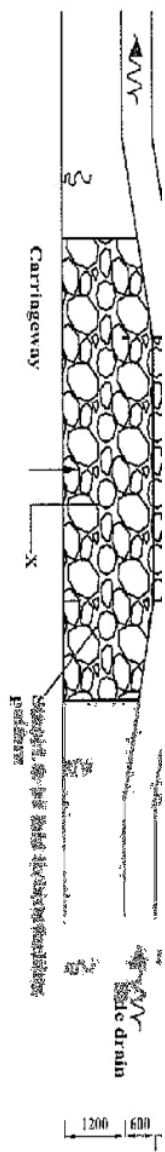
SECTION	DESCRIPTION
1	HEADWALL
2	HEADWALL
3	HEADWALL
4	HEADWALL
5	HEADWALL
6	HEADWALL
7	HEADWALL
8	HEADWALL
9	HEADWALL
10	HEADWALL
11	HEADWALL
12	HEADWALL
13	HEADWALL
14	HEADWALL
15	HEADWALL
16	HEADWALL
17	HEADWALL
18	HEADWALL
19	HEADWALL
20	HEADWALL
21	HEADWALL
22	HEADWALL
23	HEADWALL
24	HEADWALL
25	HEADWALL
26	HEADWALL
27	HEADWALL
28	HEADWALL
29	HEADWALL
30	HEADWALL
31	HEADWALL
32	HEADWALL
33	HEADWALL
34	HEADWALL
35	HEADWALL
36	HEADWALL
37	HEADWALL
38	HEADWALL
39	HEADWALL
40	HEADWALL
41	HEADWALL
42	HEADWALL
43	HEADWALL
44	HEADWALL
45	HEADWALL
46	HEADWALL
47	HEADWALL
48	HEADWALL
49	HEADWALL
50	HEADWALL
51	HEADWALL
52	HEADWALL
53	HEADWALL
54	HEADWALL
55	HEADWALL
56	HEADWALL
57	HEADWALL
58	HEADWALL
59	HEADWALL
60	HEADWALL
61	HEADWALL
62	HEADWALL
63	HEADWALL
64	HEADWALL
65	HEADWALL
66	HEADWALL
67	HEADWALL
68	HEADWALL
69	HEADWALL
70	HEADWALL
71	HEADWALL
72	HEADWALL
73	HEADWALL
74	HEADWALL
75	HEADWALL
76	HEADWALL
77	HEADWALL
78	HEADWALL
79	HEADWALL
80	HEADWALL
81	HEADWALL
82	HEADWALL
83	HEADWALL
84	HEADWALL
85	HEADWALL
86	HEADWALL
87	HEADWALL
88	HEADWALL
89	HEADWALL
90	HEADWALL
91	HEADWALL
92	HEADWALL
93	HEADWALL
94	HEADWALL
95	HEADWALL
96	HEADWALL
97	HEADWALL
98	HEADWALL
99	HEADWALL
100	HEADWALL

C-15

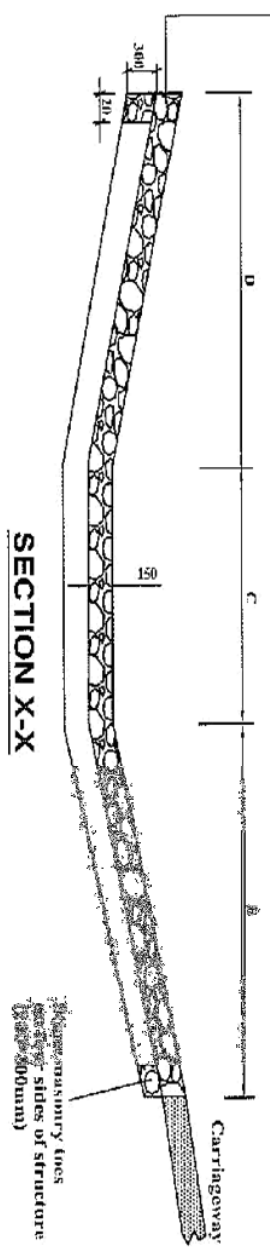


Pipe Diameter (mm)	450 (mm)	600 (mm)	900 (mm)
a	0.15	0.20	0.20
b	0.10	0.15	0.15
c	0.20	1.12	1.48
d	0.10	0.72	1.08
e	0.13	0.18	0.27
f	0.25	0.45	0.68
g	0.25	-	-
h	0.25	0.33	0.42
i	-	-	-
Volume in (m ³ /m)	0.20	0.37	0.56
Application	- Fail to poor subgrade condition - Overfill > 75% of the pipe diameter - Seasonal water flow only		
Remarks	Material for back/overfill shall be approved by the Engineer		

Pipe Diameter (mm)	450 (mm)	600 (mm)	900 (mm)
a	0.15	0.20	0.20
b	0.10	0.15	0.15
c	0.86	1.12	1.48
d	0.56	0.72	1.08
e	0.28	0.36	0.54
f	0.34	0.45	0.68
g	-	-	-
h	0.38	0.51	0.69
Volume in (m ³ /m)	0.20	0.37	0.56
Application	- Fail to poor subgrade condition - Overfill > 75% of the pipe diameter - Seasonal water flow only		
Remarks	Material for back/overfill shall be approved by the Engineer		



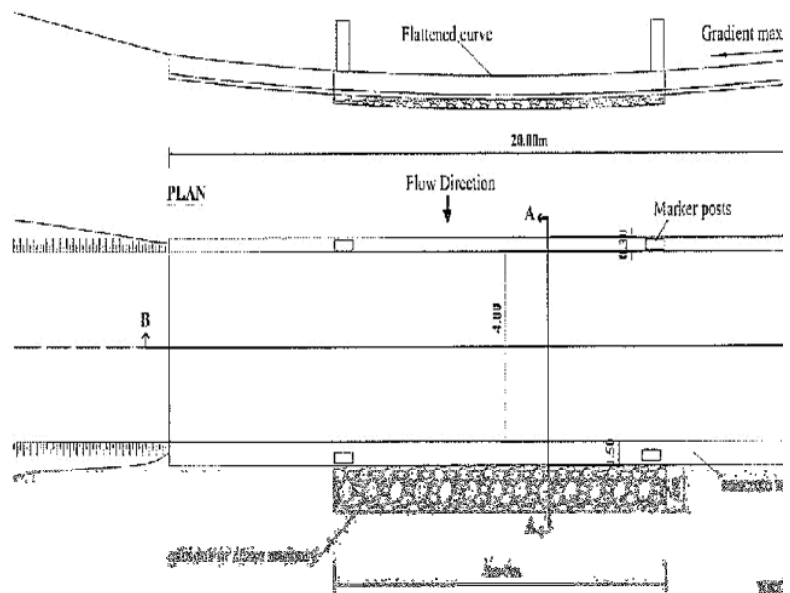
150mm Grounted Stone Pitching
(Cement mortar 1:4)



SECTION X-X

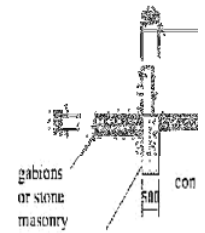
QUANTITIES TABLE						
Cross section	DIMENSIONS					Excavation(m)
	A	B	C	D	E	
A	4000	1800	600	1800	4200	7.5
	6000	1800	600	1800	4200	10.00
	4000	1400	400	1800	3600	7.00
B	6000	1400	400	1800	3600	9.00

SECTION B-B



Material : All concrete (from 1000t to 1000t)

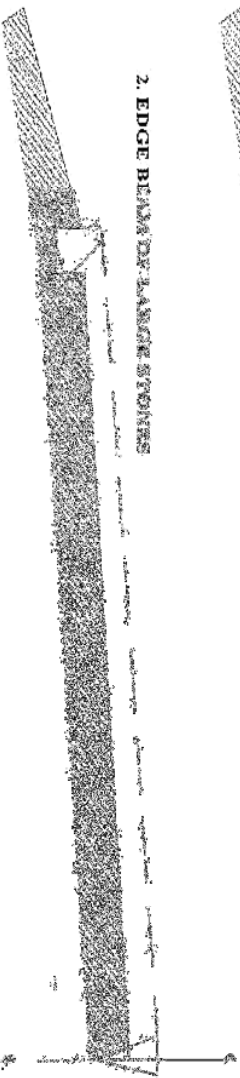
- 1 Concrete wall - 1000t
- 2 Concrete slab - 1000t or stone masonry
- 3 Gabions - 1000t or stone masonry
- 4 Concrete / masonry wall - 1000t or stone masonry
- 5 Gabions - 1000t or stone masonry
- 6 Marker posts - precast concrete: 4 no.
- 7 Excavation (slab + toes + gabions) 54.2m³



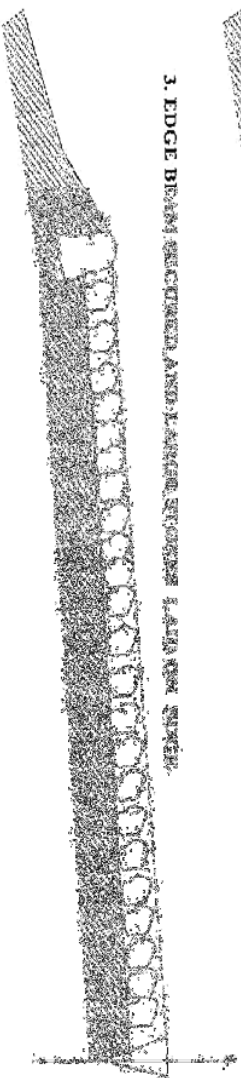
concrete wall > 1000t



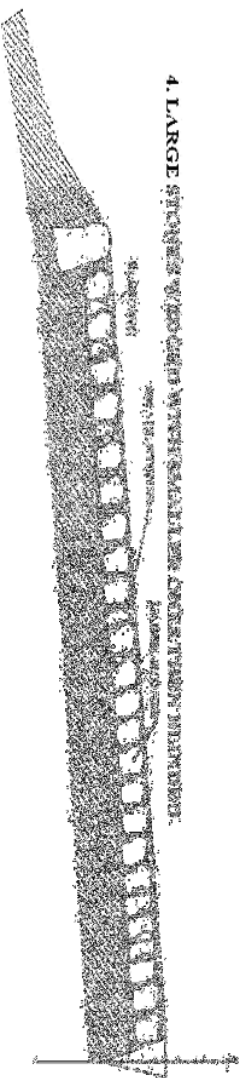
2. EDGE BEAMS OF LARGE STONES

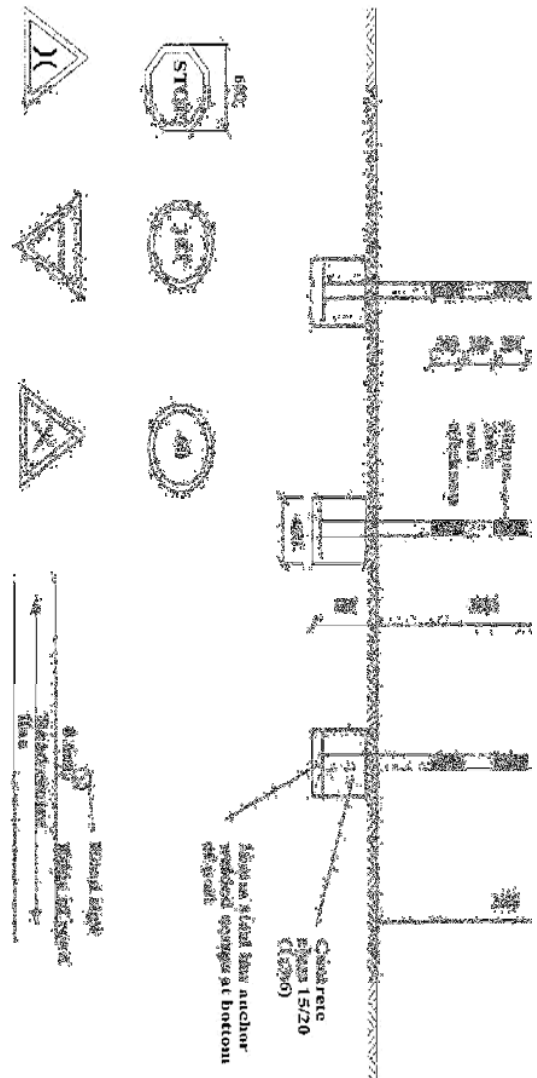


3. EDGE BEAMS SECURED AND LARGE STONES LAIN ON RIVER

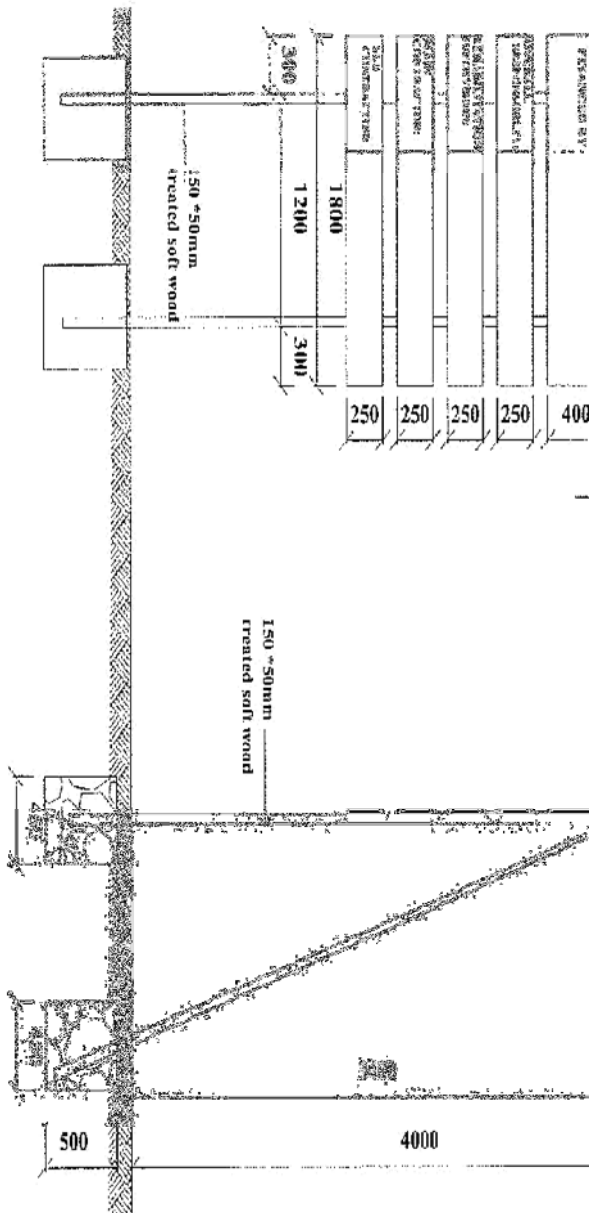


4. LARGE STONES OF 60-65 CM WITH SMALLER AND FLATTER STONES





1. The bridge is a concrete structure.
2. Sign is a concrete structure.
3. Sign is a concrete structure.
4. Sign is a concrete structure.
5. Sign is a concrete structure.
6. The bridge is a concrete structure.



NOTES

1. The wording of the project sign board and the location to be used shall be provided by the project owner.
2. Materials to be used for fabrication of signboard shall be provided by the project owner.
3. Working board posts to be attached to the posts with galvanized bolts.
4. Project board posts and struts to be embedded in concrete pillars.

PREAMBLE TO BILLS OF QUANTITIES

1. The Bills of Quantities form part of the Contract Documents and are to be read in conjunction with the Instructions to Tenderers and these Documents.
2. The prices and rates to be inserted in the Bills of Quantities are to be the full, inclusive value of the work described under the several items including all costs and expenses which may be required in and for the execution of the work described and for the Contractor's overheads and profits. The rates shall be VAT exclusive but include all other taxes, levies and fees applicable. The rates shall be based on the Works being carried out in accordance with the R2000 Strategy of using optimum labour resources.
3. Each item in the Bills of Quantities contains only a brief description of the required work. Fuller details and descriptions of the work to be done, the materials to be used, the standards of workmanship, methods of measurement and payment are to be found in the various sections of the Specifications and on the Drawings.
4. The Quantities set out in the Bills of Quantities are estimated and represent substantially the work to be carried out. There is no guarantee that the Contractor will be required to carry out all the quantity of work indicated under any one particular item or group of items in the Bills of Quantities. The basis of payment shall be the Contractor's rates and the quantities of measured work done in fulfilment of the obligations under the Contract.
5. Work shall be carried out under Dayworks items only at the direction, and with the approval, of the Engineer. The Contractor shall enter rates in the Dayworks Schedule of Rates, which shall reflect the realistic costs, including overheads and profit, of each item. If, in the opinion of the Engineer, a rate is unreasonably high or low, the Contractor may be required to amend the rate to the satisfaction of the Engineer.

BILLS OF QUANTITIES

(AS GENERATED FROM RMS)

RoadCode	C272	
Structure:		Section Name
Package:	Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020	Kiwande - Mogho ACK
Contractor		0
Bill of Quantities		Page: 1
	Summary	Project:
Item No.	Description	Amount (KShs)
1	General: Office administration and overheads/Preliminaries	
3	SETTING OUT	
4	SITE CLEARANCE	
5	EARTHWORKS	
7	EXCAVATION AND FILLING FOR STRUCTURES	
8	CULVERT AND DRAINAGE WORKS	
10	GRADING AND GRAVELLING WORKS	
12	NATURAL MATERIAL BASES AND SUBBASE	
17	CONCRETE WORKS (Major Structures)	
20	ROAD FURNITURE REPAIR AND MAINTENANCE	
25	CROSS CUTTING ISSUES	
	Sub Total	
	VAT @ 16 %	
	Total	
	Contingencies (@ 0 %)	
	Carried to page on the form of Tender	

Road Code	C272	Section Name		Kiwande - Mogho ACK		
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 1	
Bill No.1	General: Office administration and overheads/Preliminaries				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
01-50-016	Materials Investigation &Testing	KS	50,000	1.00	50,000.00	LB-MB
01-80-016	Provide and erect publicity signs as directed by the Engineer	NO.	1			LB-MB
01-80-030	Allow a prime cost for attendance to the RE,s supervisory staff including overtime	PC SUM	200,000	1.00	200,000.00	LB-MB
01-80-031	Include percentage of PC sum in item 01-80-030 for contractors overhead and profit	%	200,000			LB-MB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 2	
Bill No.3	SETTING OUT				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
03-50-001	Setting out Horizontal Alignment	M	2000			LB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 3	
Bill No.4	SITE CLEARANCE				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
04-50-003	Heavy Bush Clearing	M²	10209			LB

Road Code	C272	Section Name		Kiwande - Mogho ACK		
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 4	
Bill No.5	EARTHWORKS				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
05-50-002	Excavation & spread in soft material & compact	M³	380			LB
05-50-003	Excavation & spread in hard material and compact	M³	100			LB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 5	
Bill No.7	EXCAVATION AND FILLING FOR STRUCTURES				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
07-50-006	Selected granular fill material	M³	150			LB
Total Carried Forward to Summary:						

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 6	
Bill No.8	CULVERT AND DRAINAGE WORKS				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
08-60-027	Culvert Installation 900 mm with surround	MT	8			LB
08-60-036	Provide, place and compact class 20/25 concrete	M³	53			LB
08-60-037	Provide and place A142 fabric mesh reinforcement	M²	435			LB
08-70-001	Stone Pitching	M²	435			LB
08-70-004	Provide and place Gabion Installation	NO	8			LB
08-70-005	Provide and place Rock fill to Gabions	M³	16			LB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 7	
Bill No.10	GRADING AND GRAVELLING WORKS				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
10-50-001	Heavy grading without watering or compaction instructed by the Engineer	M²	42000			MB
10-60-001	Provide gravel wearing course- excavation,free haul, spread, water and compact gravel to specifications	M³	100			MB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 8	
Bill No.12	NATURAL MATERIAL BASES AND SUBBASE				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
12-50-001	Provide, lay and compact Hand packed stone material including fillings voids with stone dust as directed by the Engineer.	M³	130			LB

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 9	
Bill No.17	CONCRETE WORKS (Major Structures)				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
17-70-001	Drift Construction by Concrete	M³	12			MB
Total Carried Forward to Summary:						

Road Code	C272	Section Name	Kiwande - Mogho ACK			
Package: Kiwande - Mogho ACK/KeRRA/011/TTVT/39/076/2019-2020						
Contractor	0					
Bill of Quantities					Page: 10	
Bill No.20	ROAD FURNITURE REPAIR AND MAINTENANCE				Project:	
Item No.	Description	Units	Quantity	Unit Bid Rate(Ksh)	Amount KSh	Technology
20-50-010	Guardrail installation	MT	12			LB

[illegible]