MERU COUNTY GOVERNMENT

ROADS, TRANSPORT AND INFRASTRUCTURE DEPARTMENT

SURFACE DRESING OF TIMAU LOOP ROAD
TIMAU WARD

Contract Documents for Construction of Civil Engineering Works

VARIOUS FORMS, CONDITIONS OF CONTRACT, SPECIFICATIONS AND BILLS OF QUANTITIES

County Headquarters
P.O Box 120
Officer, Meru
I Department

Prepared by
Chief

FISCAL YEAR 2015-2016

SIGNATURE PAGE
The following are the Bills of Quantities referred to in the contract for **SURFACE DRESSING OF TIMAU LOOP ROAD TIMAU WARD.**

**PREPARED BY:**

Chief Officer,

Roads, Transport and Infrastructure department

The Contract for the above mentioned works, entered into on ................ day of ............... 2014 by the undersigned parties is described and defined by these Bills of Quantities together with the Agreement and Conditions of Contract contained herein including any amendments thereto.

**EMPLOYER**

NAME: .........................................
ADDRESS: .................................
DATE: ........................................
SIGNATURE: ...............................  

**CONTRACTOR**

NAME: .........................................
ADDRESS: .................................
DATE: ........................................
SIGNATURE: ...............................  

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INVITATION FOR TENDERS

CONTRACT NO.
SURFACE DRESSING OF TIMAU LOOP ROAD TIMAU WARD

1.1 The **Meru County Government** invites sealed tenders for the construction **SURFACE DRESSING OF TIMAU LOOP ROAD TIMAU WARD**.

1.2 Interested eligible candidates may obtain further information and inspect tender documents at **MERU COUNTY HEADQUATERS ,ROOM 118,MERU COUNTY GOVERNORS OFFICES,BOX 120 MERU** during normal working hours.

1.3 A complete set of tender documents may be obtained by interested candidates upon payment of non-refundable fees of Kshs 1000.

1.4 Tender surety security in the amount of 2% of the tendered sum is required as detailed in the instructions to bidders.

1.4 Prices quoted should be net inclusive of all taxes, must be in Kenya shillings and shall remain valid for 90 days from the closing date of tender.

1.5 Completed tender documents are to be enclosed in plain sealed envelopes marked with Tender name and reference number and deposited in the Tender Box at **MERU COUNTY GOVERNORS OFFICES,GROUND FLOOR or to be addressed to MERU COUNTY GOVERNMENT,BOX 120 MERU** so as to be received on or before 12.00 hours on.................................

1.6 Tenders will be opened immediately thereafter in the presence of the candidates or their representatives who choose to attend.

......................................................... (Signed)

County secretary

**SECTION II**

**INSTRUCTIONS TO TENDERERS**

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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 who have been prequalified by the employer may not include the following information and documents with their tenders, unless otherwise stated:

(a) copies of certificates of registration, and principal place of business;
(b) total monetary value of construction work performed for each of the last five years;
(c) experience in works of a similar nature and size for each of the last five years, and clients who may be contacted for further information on these contracts;
(d) major items of construction equipment owned and to be engaged on site;
(e) qualifications and experience of key site management and technical personnel proposed for the Contract;
(f) reports on the financial standing of the Tenderer, such as profit and loss statements and auditor’s reports for the last five years;
(g) authority to seek references from the Tenderer’s bankers.

1.3 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.

1.4 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.

1.5 The procurement entity’s employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tend
1.6 The procuring entity shall allow the tenderer to review the
tender document free of charge before purchase.

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 herebelow:-

(a) These instructions to Tenderers
(b) Form of Tender
(c) Conditions of Contract and Appendix to Conditions of
   Contract
(d) Form of tender surety
(e) Specifications
(f) Drawings
(g) Bills of Quantities/Schedule of Rates (whichever is
   applicable)

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 herebelow.

3. **Preparation of Tenders**

3.1 All documents relating to the tender and any correspondence shall be in English Language.

3.2 The tender submitted by the Tenderer shall comprise the following:
   (a) The Tender;
   (b) Tender Security;
   (c) Priced Bill of Quantities/Schedule of Rates for lump-sum Contracts
   (d) 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/Schedule of Rates. 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/Schedule of Rates. 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 ninety (90) 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 authorised 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.

3.10 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.

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.

Only one tender may be submitted by each tenderer. Any tenderer who fails to comply with this requirement will be disqualified.

4.4 Any tender received after the deadline for opening tenders will be returned to the tenderer un-opened.

4.5 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 will be corrected 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) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer’s representative, there is an obvious typographical error, in which case the adjustment will be made to the entry containing that error.

(c) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bill of Quantities/Quotation, the amount as stated in the Form of Tender shall prevail.
(d) The Error Correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the Corrected Builder’s Work (i.e. corrected tender sum less P.C. and Provisional Sums).

(e) The Error Correction Factor shall be applied to all Builder’s Work (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuation of variations.

(f) The amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and with concurrence of the Tenderer, shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security forfeited.

5.5 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

5.6 Contract price variations shall not be allowed for contracts not exceeding one year (12 months).

5.7 Where contract price variation is allowed, the valuation shall not exceed 5% of the original contract price.

5.8 Price variation requests shall be processed by the procuring entity within 30 days of receiving the request.

5.9 Preference where allowed in the evaluation of tenders shall not exceed 15% off the engineers estimate.

5.10 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.

5.11 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.

5.12 The tenders shall be evaluated on the basis of Financial aspects, it is assumed that pre-qualified contractors have been technically qualified.

The preliminaries shall be
- General compliance with tender requirements (25% of total marks)

The financial consideration shall be
- Provision of appropriate Bid Bond (2%)
- Authority to seek reference from the tenderers bankers (20%)
- The tendered sum (30% for within 5% off engineers estimate, 10% for within the next 5% off Engineers estimate, and 0% for the rest)

6. Award of Contract

6.1 The award of the Contract will be made to the Tenderer who has offered the lowest evaluated tender price.

6.2 Notwithstanding the provisions of clause 6.1 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.

6.3 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.

6.4 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 21 days of receipt, the successful Tenderer will sign the Agreement and return it to the Employer.
6.5 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.

6.6 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.

6.7 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

6.8 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.

7. **Corrupt and fraudulent practices**

7.1 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.

7.2 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.

7.3 Further a tenderer who is found to have indulged in corrupt and fraudulent practices risks being debarred from participating in public procurement in Kenya.
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SECTION III - 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 or Schedule of Rates [whichever is applicable]

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 Any thing 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  Instructions

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

9  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 Conditions of Contract.

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/Schedule of Rates

12.1 The Bills of Quantities/Schedule of Rates 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/Schedule of Rates 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/Schedule of Rates.

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/Schedule of Rates, the rate in the Bill of Quantities/Schedule of Rates 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/Schedule of Rates, 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 herebelow (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 Schedule of Rates.

(i) Advance payment: 0%

(ii) First stage (Road formation); Value of work measured less 10% retention.

(iii) Second stage (Culverts installation and other drainage works); Value of work measured less 10% retention.

(iv) Third stage (Gravelling and compaction); Value of work measured.

(v) After defects liability period; 10% retention

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 CONDITIONS OF CONTRACT

THE EMPLOYER IS THE CHIEF OFFICER, TRANSPORT AND INFRASTRUCTURE,

Name: MERU COUNTY GOVERNMENT

Address: P.O Box 120 MERU

Name of Employer’s Representative: COUNTY ENGINEER

Title; County ENGINEER

Telephone: __________________________

The name of the Contract is SURFACE DRESSING OF TIMAU LOOP ROAD TIMAU WARD

The Works consist of ;........................................................................................................

The Start Date shall be;TO BE COMMUNICATED UPON AWARD OF CONTRACT

The Intended Completion Date for the whole of the Works shall be; THREE(3)MONTHS AFTER COMMENCEMENT

The Site is located .................................................................

The Defects Liability Period is 180 days.

Amount of Tender Security is 2% of the tender sum in the form of an insurance or a bank guarantee .

The name and Address of the Employer for the purposes of submission of tenders is COUNTY GOVERNMENT OF MERU P.o BOX 120 MERU

The tender opening date and time is 12.00 hours on ................. day of ...........

The amount of performance security is 0% of the tender sum in the form of unconditional Bank guarantee
SECTION 1V:

SPECIFICATIONS
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EXTENT OF WORKS

The works to be executed under this Contract comprise spot Improvement and/or rehabilitation works on selected sections, in TIMAU Ward which will restore them to motorable conditions.

SECTION 01 : PRELIMINARY AND GENERAL ITEMS

Scope:

This section refers to those items that are needed at the start and end of the works or are provisional items related to the whole Project.

01 - 001: Mobilisation, Establishment and Demobilisation from Site

The Contractor shall be responsible for the provision of all equipment, tools, material, temporary stores and housing required to successfully carry out the required works.

The Contractor shall ensure that all possible means of protection is given to his/her own staff at all times. Such protection shall include provision of high visibility clothing or vests for the workforce. 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
- Antibiotic – Amoxil, Septrin
- Eye ointment
- Oral re-hydration sachets
- Surgical gloves

Warning signs, fences, barriers, detours, etc. shall be properly positioned well in advance so that all traffic has been well and safely accommodated before work is allowed to start.

Traffic signs and other traffic control facilities shall be kept in good condition and located in positions where they are visible to road users.
At the completion of the works, all such temporary housing, equipment, signs and tools shall be removed from the site.

Measurement and Payment:

No separate measurements or payments will be made for this item. The Contractor shall be deemed to have included the cost for this item elsewhere in his rates.

**01 – 002: Insurance and Bonds**

**Description**

The Contractor shall be required to provide insurance and sureties in accordance with relevant Clauses in the Conditions of Contract.

**Measurement and Payment**

The costs associated with this item shall be deemed to have been included in the contractor's unit rates

**01 – 003: Quality Control Tests**

Quality control tests shall be carried out to ensure that the works have been carried out in accordance with the specifications. To ensure consistency of quality, various tests shall be carried out as directed by the Engineer. For some tests the minimum technical standard will be specified while for some the allowed tolerance stating the range within which the results of the tests are considered acceptable.

The Engineer has the ultimate responsibility for approving or rejecting the quality of the works. Where the works fail to meet the required specifications the Engineer shall decide on the appropriate method of rectification. This may require removing the defective work and redoing the work. In such cases the corrections shall be at the contractor's expense.

**Measurement and Payment**

No separate measurement and payment shall be made for testing and contractor shall be deemed to have allowed in his rates and prices for the cost of complying with the testing requirements.

**01 – 004 : Publicity Sign Boards**
The Contractor shall provide SignBoards as specified in the Drawings and as directed by the Engineer. The signboards shall be placed at the beginning and end of the road or road section covered by this Contract.

Signboards shall be maintained for the entire duration of the Works.

**Quality Control**

The Engineer shall check visually that signboards have been erected in accordance with drawings and specifications.

**Measurement: Number**

The unit of measurement shall be number of signboards erected

**Payment**

The unit rate shall be the full compensation for labour, tools and any incidental costs required for carrying out the work.
SECTION 02 : SETTING OUT

02 – 001 : Setting Out of the Horizontal Alignment

The activities required in re-establishment of the horizontal alignment of the road include setting out of the centre line, cross section widths, drains, structures, etc.

The centreline shall follow the existing road alignment as much as possible.

The minimum standards as shown in Table 2.1 shall apply

Table 2.1 Alignment Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Flat and Rolling Terrain</th>
<th>Hilly Terrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal Curves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirable Minimum radius</td>
<td>100m</td>
<td>50m</td>
</tr>
<tr>
<td>Gradients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirable Minimum</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Desirable Maximum</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Absolute Maximum</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Stopping Site Distances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirable Minimum</td>
<td>80m</td>
<td>80m</td>
</tr>
<tr>
<td>Absolute Minimum</td>
<td>40m</td>
<td>40m</td>
</tr>
</tbody>
</table>

The cross section details of the road shall be given in the drawing or as directed by the Engineer.

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 one metre outside the cleared width and on one side of the road only.
• Cross section widths shall be checked at 10m intervals and shall have maximum tolerances of +/- 5mm

**Measurement : m**

The unit of measurement shall be in linear metres of the road

**Payment**

The unit rate shall be the full compensation for labour and any incidental costs required for carrying out the work.
SECTION 04 : SITE CLEARANCE

Scope

This section 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 full width of the road and quarry and borrow areas.

04 – 001 : Site Clearance

i. Bush Clearing

Clearing of bush shall consist of cutting of all vegetation including small trees, grasses and any undergrowth to a height of not more than 100mm. The cleared material shall be collected into heaps away from the side drains and must not cause visibility obstruction to traffic.

ii. Trees and Stumps removal

Trees outside the construction width but within the road reserve having a trunk girth of more than 450mm at a point 600mm above the ground shall not be removed without the prior approval of the Engineer but branches may be trimmed to improve visibility.

The contractor shall excavate around the trees to be removed to a depth not less than 0.5 m before cutting the roots. Existing stumps shall be uprooted in the same manner. All holes left by the removal of trees and stumps shall be back filled with approved material and compacted to existing ground level. Large trees removed shall be cut down into logs that are not more than 1.5m long. Burning of cut bush, tree stumps and any debris shall not be allowed.

iii. Stripping and grubbing

Stripping and grubbing shall consist of removal of the topsoil including anthills and other unsuitable material, depositing the debris as directed. Loose boulders up to 1.5m girth shall also be deposited outside the cleared area.

iv. Boulder Removal

Boulders greater than 1.5 m girth shall be removed either by rolling to the edge of the road way; burying the boulder in a dug hole below the sub-grade level; splitting the boulder using the fire; water and wedges method or by towing and pushing using equipment.

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

Table 4.1: Site Clearing Widths
### Road Category

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

### Work Method

These activities shall be carried out using labour.

### Quality Control

- The road width shall be checked using tape measure at 50-m intervals and shall be free of trees, boulders, or any organic matter.
- Quarry and borrow areas shall be visually checked to be free of trees, top soil, or any organic matter.
- The dimensions of the quarry will checked using tape measure and shall have a maximum tolerance of + / - 0.5m

### Measurement and Payment

i. **Bush Clearing:** \( m^2 \)

The unit of measurement shall be total area in square metres calculated as the product of the road width left hand side and right hand side of the carriageway instructed by the Engineer and the length of road cleared.

The unit rate shall include labour, tools, and any other incidental costs item required complete the work.

ii. **Tree and stumps removal:** Dayworks

Payment shall be made on a daywork basis for the labour and equipment as directed by the Engineer.

iii. **Stripping and Grubbing:** \( m^2 \)

The unit of measurement shall be the total area in square metres of topsoil removed.
The unit rate shall include labour, tools, and any other incidental costs item required to complete the work.

iv Boulder Removal: Dayworks

Payment shall be made on a daywork basis for the labour, tools and equipment as directed by the Engineer.
SECTION 05 : EARTHWORKS

Scope

This section covers all excavation of cuttings, placing, watering and compaction of hard and soft material to form embankments.

05 – 001 : Re - Establishment of the Vertical Alignment

This activity involves re-establishing of the vertical alignment of the road section and includes setting out of slots marking the level road bench or platform.

The width of the slot shall be 0.5 m wide and shall be set out at 10m intervals along the straight section and 5m on the curve sections of the road. Each slot shall be compacted using hand rammers until no more imprints of the rammer on the surface of the slot can be seen. The length of each slot shall be same as the formation width of the road.

Work method

The contractor shall apply Labour methods to carry out this item work.

Quality Control:

- The hand rammer shall be not less than 5kg
- The level of the slot shall be checked using 2m straight edge and spirit level
- The longitudinal profile of the road shall be checked using boning rods at every third slot and shall have maximum tolerances of 50mm

Measurement: m

The unit of measurement shall be linear metres of road alignment set out

Payment:

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

05 – 002 : Excavation to level

This activity involves cutting of the material to form a level road bench or platform and placing the excavated material as fill or in spoil areas approved by the Engineer.

In the case where material has to be borrowed this shall only be done from borrow areas approved by the Engineer.

The fill layers to be compacted shall not exceed 150mm

Work Method
The contractor shall use **Labour** to carry out this item of work.

**Quality Control**

- The width of the terrace shall be checked using tape measure at intervals of 50 m and shall have a tolerance of +/− 50mm.
- The level terrace or platform shall be horizontal in the cross-sectional direction and shall have a tolerance of +/− 15 mm when measured using a two-meter straight edge.
- The longitudinal profile shall be checked with boning rods and have a maximum tolerance of +/− 50 mm when measured.

**Measurement; m³**

The unit of measurement shall be total volume in cubic metres of compacted material on level terrace or platform formed.

**Payment**

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

**05 – 003 : Side drain excavation**

Excavation of the side drain consists of excavating the drain rectangular profile, sloping from the ditch bottom to the shoulder break point, and back sloping from outer ditch bottom line to the in-situ soil slope.

The material from the side drains shall be used for the formation of the camber. Where additional material is required to achieve the required camber, the widths of the side drains may be increased.

Details of the side drains shall be given in the drawings or shall be as directed by the Engineer.

**Work method**

The contractor shall apply **labour** methods to carry out this item work

**Quality Control**

- The dimensions of the side drains shall be checked at every 50m using the appropriate template.
- The excavation of the ditch, slope and back slope activities shall be carried out sequentially for quality control purposes
- **Longitudinal profile of the side drains shall be checked using boning rods at every 50m and shall have a tolerance of +/-50mm.**

**Measurement: m³**
The unit of measurement shall be in cubic metres of material excavated to form the side drains.

Payment

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

05 – 004 : Spreading and Camber formation

This activity involves spreading materials from the side drains and forming the specified camber on the road.

Work method

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

Quality Control

- The width of the carriageway including the shoulders shall be checked using tape measure at every 50m with tolerance of + 50mm / - 20mm
- The camber shall be checked using camber board and spirit level at every 50m with and shall have a tolerance of +/- 1%.

Measurement: m²

The unit of measurement shall be in square meters of carriageway formed.

Payment

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

05 – 005 : Compaction

i. Excavation to level; ii. Camber formation; iii. Gravel wearing course

Compaction of the reshaped or reformed road shall be by number of passes as directed by the Engineer depending on the compaction equipment used. Unless otherwise instructed, the moisture content at the time of compaction shall be within the range of +/- 2% of the optimum moisture content.

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

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

**Quality control**

- Unsuitable material should not be used;
- Compaction shall be carried out using either dead weight or pedestrian rollers of approved weight and dimensions.
- The minimum passes of compaction to applied shall be that which no more roller imprint on the surface can be seen and to a minimum dry density given in table 5.0 below;
- The camber shall be checked at 100m intervals using camber boards and shall not be less than 5% with tolerances of +/- 1%
- Material for compaction shall be placed in layers of 200mm loose depth unless otherwise directed. The layers shall be parallel to the top of the subgrade level.

Table 5.0: Minimum dry density

<table>
<thead>
<tr>
<th>Layer location.</th>
<th>Minimum compaction dry density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavation to level platform</td>
<td>95% MDD (AASHTO T99)</td>
</tr>
<tr>
<td>Road formation and fill material</td>
<td>100% MDD (AASHTO T99)</td>
</tr>
<tr>
<td>Gravel wearing course</td>
<td>95% MDD (AASHTO T180)</td>
</tr>
</tbody>
</table>

**Measurement:** $m^3$

The unit of measurement shall be the volume of material compacted. The volume shall be calculated as the product of the plan area and the average compacted fill, embankment, side drain material or gravel wearing course material thickness.

**Payment**

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

**05 – 006 : Mitre drains**

i. Labour  ii. Equipment
Mitre drains (turn out or offshoot drains) shall be sighted as frequently as possible and excavated in a manner that no erosion shall be caused at the discharge point. The width and gradient of the mitre drains shall be the same as that of the side drains.

The cross section details shall be provided in the drawings or shall be as directed by the Engineer.

**Work Method**

The contractor shall use either labour or Equipment as shall be directed by the Engineer.

**Quality Control**

- The longitudinal profiles shall be checked using boning rods and shall have maximum tolerances of +/- 25mm
- The dimensions of the mitre drains shall be checked using template and tape measure and shall have maximum tolerances of +20mm or -10mm.
- The location of the mitre drains shall be checked visually.

**Measurement**

i. Labour
The unit of measurement shall be cubic metres of material excavated or reshaped from the mitre drains.

ii. Equipment
The unit of measurement shall be linear metres of formed or reshaped mitre drains.

**Payment**

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

**05 – 007 : Catch water drains**

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

**Work Method**

The contractor shall apply labour methods to carry out this item work

**Quality Control**

The location of the drains shall be checked and approved by the Engineer before construction;
The cross section dimensions shall be checked using tape measure at 25 m intervals and tolerances shall be +/- 25mm

**Measurement:** \( m^3 \)

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

**Payment**

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

**SECTION 08 : CULVERT AND DRAINAGE WORKS**

**Scope**

This section covers all excavation of cuttings, haulage, placing and compaction of material to form embankments. The activities included in this section include road formation, excavation of fill material, placing, watering and compaction.

**08 – 001 : Excavation of foundation for drainage structures**

This Item consists of excavating trenches for culverts, foundations for head and wing walls.

The dimension of excavation shall be specified in the Drawings or shall be as directed by the Engineer.

The Engineer shall approve all excavation work before the contractor is allowed to proceed with other works.

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

**Work Method**

The contractor shall apply **labour** methods to carry out this item work

**Quality Control**

- The dimensions of the trench shall be checked using tape measure and shall have a tolerance of +/- 50mm
- The invert level shall be checked using line and level and shall have a tolerance of +/- 50mm
- The trench bottom shall be checked using straight edge, spirit level and shall have a tolerance of +/- 10mm

**Measurement:** \( m^3 \)
The unit of measurement shall be total volume in cubic metres of material excavated

**Payment**

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

**08 – 002 : Supply and installation concrete culvert pipes**

i. - 450mm  ii. - 600mm dia;  iii. – 900mm dia.  iv. – 1200mm

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

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

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

Sealing of joints shall be done with mortar 1: 4

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

Where instructed by the Engineer, pipe culverts shall be haunched using 150mm concrete Class 15/20 surround.

**Work Method**

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

**Quality Control**

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

**Measurement:**  m

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

**Payment**

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

08 – 003 : Provide material and construct minor drainage structures

i. Stones,  ii. Concrete blocks

This item consists of provision of material and construction of masonry walls as detailed in the drawings. Aprons shall be constructed using concrete as specified under item 08 – 004.

Work Method

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

Quality Control

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

Measurement m³

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

Payment

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

08 – 004 : Provide material and construct minor drainage structures – Concrete

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

Work Method

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

Quality Control

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

• The concrete shall be visually checked for any cracks or honey combing

Measurement $m^3$

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

Payment

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

08 – 005 : Provide and install scour checks

i. Stone; ii. Wooden stakes; iii. Concrete

Scour checks shall be constructed using either stones or sticks, as instructed by the Engineer.

Construction of concrete scour checks shall be in class 20/20 concrete unless otherwise specified and as per the details shown in the drawings.

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

Table 8.1 : Scour checks spacing

<table>
<thead>
<tr>
<th>Gradient of Drain</th>
<th>Scour Check Spacing</th>
<th>Gradient of Drain</th>
<th>Scour Check Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% or less</td>
<td>not required</td>
<td>8%</td>
<td>7.5m</td>
</tr>
<tr>
<td>5%</td>
<td>20m</td>
<td>9%</td>
<td>6m</td>
</tr>
<tr>
<td>6%</td>
<td>15m</td>
<td>10%</td>
<td>5m</td>
</tr>
<tr>
<td>7%</td>
<td>10m</td>
<td>&gt;10%</td>
<td>4m</td>
</tr>
</tbody>
</table>

Work method

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

Quality Control

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

**Measurement:** No.

The unit rate of measurement shall be the number of scour checks constructed.

**Payment**

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

---

**08 – 006 : Gabion Installation**

**Description**

This activity involves provision and installation of the gabion. Gabion shall include gabion mattresses and gabion boxes and for purposes of construction and method of measurement and payment, no distinction shall be made between them.

Gabions shall be ‘Maccaferi” boxes or ‘Reno’ mattresses or equivalent.

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

**Work Method**

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

**Quality Control**

The workmanship in terms of placing and tying shall be checked visually.

**Measurement:** m²

The unit of measurement shall be the total surface area 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 works as prescribed.

---

**08 – 007 : Rockfill to Gabion**

**Description**

This activity involves providing selected rock, crushed if necessary, packing and compacting inside the gabion boxes.
Rockfill shall comprise of broken rock of 150mm minimum dimension and 300mm maximum dimension. The sides shall be packed first in the form of a wall using the largest pieces, with majority placed as headers with broken joints to present a neat outside face. The interior of the gabion shall be hand packed with smaller pieces and the top layers shall be finished off with larger pieces. The whole interior and top layers shall be packed tight and hammered into place.

**Work method**

The contractor shall use a combination of labour and equipment to carry out this activity.

**Quality Control**

The workmanship in terms of filling and compaction of the stones in the gabion boxes shall be checked visually.

**Measurement:** $m^3$

Rockfill to gabion boxes shall be measured by the cubic metre calculated as the volume of gabion boxes filled.

**Payment**

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

**08-008 : Stone Pitching**

The activity consists of levelling the area to be covered with stone pitching, collecting stones, laying stones, applying mortar to the joints and constructing weep holes.

The area to be covered with stone pitching shall be trimmed to level and/slope indicated on the drawings and as directed by the Engineer. The prepared surface shall be firm and well compacted.

The stones shall be set on edge and securely bedded with the largest dimensions at right angles to the flow of water, fitted closely together so as to leave only a minimum of voids between the stones which shall be filled in 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 mortar (grout) of mixture 1:4 and at a minimum thickness of 150 mm. The mortar shall be troweled off flush with the surface of the stones.

Weep holes shall be provided to stone pitching on slopes at an average frequency of one per square meter unless otherwise directed by the Engineer.
The surface of the stone pitching shall be protected from direct sunshine and kept moist for 7 days.

**Work Method**

The Contractor use labour to carry out this item of work

**Quality Control**

- The quality of stones shall be visually checked
- The dimensions of the area stone pitched shall be checked using tape measure and shall have a tolerance of + / - 50mm
- The quality of workmanship such as placing and grouting shall be visually checked.

**Measurement:** \( \text{m}^2 \)

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

**Payment**

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

**SECTION 10: GRADING AND GRAVELLING**

**Scope:**

Grading covers the works involved in the reinstatement of the road carriageway to the camber by removing the high points and filling up gullies corrugations and wheel ruts to restore smooth running surface. Gravelling consists of excavation, loading hauling and spreading of gravel wearing course material on the formation of 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 borrow pits or excavation in cuttings. Gravel material shall conform to the requirement given in Table 10.1

**Table 10.1: Requirement for Gravel Wearing Course**
### Grading Requirements After Compaction

<table>
<thead>
<tr>
<th>Sieve (mm)</th>
<th>% by Weight Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>28</td>
<td>95 - 100</td>
</tr>
<tr>
<td>20</td>
<td>85 - 100</td>
</tr>
<tr>
<td>14</td>
<td>65 - 100</td>
</tr>
<tr>
<td>10</td>
<td>55 - 100</td>
</tr>
<tr>
<td>5</td>
<td>35 - 92</td>
</tr>
<tr>
<td>2</td>
<td>23 - 77</td>
</tr>
<tr>
<td>1</td>
<td>18 - 62</td>
</tr>
<tr>
<td>0.425</td>
<td>14 - 50</td>
</tr>
<tr>
<td>0.075</td>
<td>10 - 40</td>
</tr>
</tbody>
</table>

### Plasticity Index Requirements PI

<table>
<thead>
<tr>
<th>Zone</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>WET</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>DRY</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

### Bearing Strength

<table>
<thead>
<tr>
<th>Traffic VPD</th>
<th>CBR</th>
<th>Equivalent mm/Blo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Less than</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>CBR at 95% at MDD, Modified AASHTO and 4 days soak</td>
<td>Lower quality material (CBR 15) may be accepted if no better material can be found</td>
<td></td>
</tr>
</tbody>
</table>

**NB:** Wet Zone - mean annual rainfall greater than 500 mm.
Dry zone - mean annual rainfall less than 500 mm.

The Engineer shall approve quarries and their extent of exploitation. The 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 therefore 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 proviso that the Employer is not to incur additional expenses in connection with its winning and haulage. Contractor is deemed to have included in his rates for the provision of the gravel material to have included the cost of complying with the testing requirements.

**10 – 001: Removal of Overburden**

The Item consists of excavation of overburden including loading, hauling and stockpiling at the approved locations. The thickness of the overburden layer to be removed shall be determined from the depths of the trial pits dug at a 30m grid within the quarry area.

The overburden shall be removed and deposited neatly in order to use it again to reinstate the quarry at the end of improvement work.
Work Method:
The contractor shall use labour or equipment to carry out this item of work

Quality Control

- The location and manner of stock piling of the overburden for the reinstatement of the quarry shall be visually checked

Measurement: \( m^3 \)

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

Payment

The unit rate shall include full compensation for labour, material equipment, haulage and any incidental item costs necessary to carry out the works as prescribed.

10 – 002 : Excavation of Gravel

The gravel shall be excavated from quarries approved by the Engineer. It is the Contractor's obligation to inform the Engineer in the case that the quality / availability of the gravel changes during the course of excavation.

Oversize stones and boulders 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 for structures and scour checks

Work Method

i. Labour based methods

The contractor shall excavate and stockpile the gravel in bays for efficient loading by labour.

ii. Equipment methods

The Contractor shall excavate the gravel and stockpile in heap(s) for the efficient loading by equipment.

Quality Control:

- The widths of the loading bays shall be checked before excavation can commence
- The loading bays shall be checked to ensure it is free draining.

Measurement: \( m^3 \)
The unit of measurement shall be the total volume in cubic metres of gravel excavated and stockpiled.

**Payment**

The unit rate shall include full compensation for labour, material equipment, and any incidental item costs necessary to carry out the works as prescribed.

10 – 003 : Haulage

This activity involves loading of excavated gravel, haulage by appropriate equipment and off-loading of the same as specified in the drawings or as directed by the Engineer. Where the loads delivered in any load falls short of agreed equipment capacity, dumping shall not be permitted unless the agreed spacing is adjusted accordingly.

Where loads supplied are found to contain material other than from the approved quarry and thus of unacceptable quality, the Engineer shall cause them to be removed from site at the contractor’s expense.

**Work Method:**

The Contractor shall use a combination of both Labour and equipment to carry out this Item work

**Quality Control:**

- No haulage equipment shall be used unless its capacity has been ascertained the Engineer
- The quality of gravel dumped on the road shall be visually checked daily
- The quantity of material delivered in each load shall be checked before dumping is allowed
- The distance between the stacks shall be checked using tape measure

**Measurement:** \[ m^3 \text{km} \]

‘Free haul’ distance shall be 1.5km ‘Overhaul distance shall be distances greater than ‘free haul’ distance and shall apply for distance from the end of 1.5 km. freehaul distance to centre of processed material measured along the shortest route as determined by the Engineer.

Haulage of fill or gravel material shall be measured by the unit \( m^3\text{km} \) calculated as the product of ‘overhaul quantity in cubic metres and overhaul distance in kilometres measured as indicated above.
Payment

The unit rate shall include full compensation for labour, material equipment, and any incidental item costs necessary to carry out the works as prescribed.

The rate for haulage of gravel shall include cost for the free haul distance of 1.5 km measured from the centre of volume of the source of material.

10 – 004 : Spreading of gravel

i. Labour methods  ii. Equipment methods
This activity involves spreading gravel material, shaping to ensure uniform thickness of the layer across the full width of the road and the to specified camber. Spreading also includes, removing any oversized stones or boulders which can not be broken down to required size, spoil dump.

Where water needs to be added, it shall be applied in an even manner and the rate of application shall be such that no transverse or longitudinal flows occur. Unless otherwise instructed by the Engineer, the moisture content shall be within the range of +/- 2% of the optimum moisture content.

Work Method:

The Contractor shall use Labour or Equipment to carry out this Item work.

Quality Control:

• The gravel surface width shall be checked at every 100m interval using tape measure and shall have tolerance of + / - 50mm
• Trial holes at every 100m shall be used to check the gravel surface thickness and shall have a tolerance of +5mm / - 0mm
• The camber cross fall shall be checked at every 50m and the maximum tolerances shall be + / - 1 %
• The longitudinal profile shall be checked with every load to ensure a smooth surface with no corrugations or depressions

Measurement: m²

The unit of measurement shall be in square metres of carriageway formed

Payment

The unit rate shall be the full compensation for labour, tools, equipment and any incidental costs required for carrying out the work.
10 – 005 : Ditch and Shoulder grading

This activity consists of cutting of a V- ditch and reinstating or reforming of the shoulders of the road using either Towed or Motor grader.

Pegs 400 to 500mm shall be placed at 10 to 20 m intervals on the inner edge of the ditch.

For earth roads, the ditch and slope materials shall be bladed towards the centre of the road.

For bladed gravel roads the material from ditch and slope shall be bladed away from the carriageway.

Table 10.2: Overall width ditch to ditch

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

Work Method

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

Quality Control

Gradient of the ditch shall be checked at 20m interval using boning roads and shall drain to the natural drainage channels or mitre drains placed at regular intervals.

Measurement: km

The unit of measurement shall be kilometres of ditch and shoulder formed

Payment

The unit rate shall be the full compensation for labour equipment and any incidental costs required for carrying out the work.
10 – 006 : Carriageway Grading

i) Light Grading

This activity shall consist of trimming of the carriageway to control roughness and corrugations using either a towed grader or a motorized grader. The width of the carriageway shall be as specified in table 10.2.

Pegs 200 to 300mm shall be placed at 10 to 20 m intervals to mark edge of the carriageway.

The material shall be bladed toward the center of the road starting from both edges to the specified camber.

Work Method

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

Quality Control

- The width of the carriageway (see table 10.2) shall be checked using tape measure at every 100m with tolerance of +50mm or -20mm.

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

Measurement: $m^2$

The unit of measurement shall be square metres of carriageway graded.

Payment

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

ii) Heavy Grading

This activity shall consist of scarifying of the existing carriageway surface, cutting high spots and moving materials to fill potholes, corrugations and wheel ruts and reshaping of the surface to the specified camber, using either towed or motorized grader. All loose rocks, roots grasses shall be removed and disposed well clear of the drains.

Pegs 300 to 400mm shall be placed at 10 to 20 m intervals to mark edge of the carriageway.

The material shall be bladed toward the center of the road starting from both edges until the specified camber is achieved.
Work Method

The contractor shall use equipment to carry out this item work

Quality Control

- The width of the carriageway (see table 10.2) shall be checked using tape measure at every 100m with tolerance of + 50mm or -20mm.

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

Measurement:  \( m^2 \)

The unit of measurement shall be square metres of carriageway graded.

Payment

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

10 – 007: Restoration of Quarries and Borrow pits

The ground shall be levelled, topsoil hauled back and uniformly spread over the entire exposed/excavation area.

Adequate drainage provisions shall be made to protect excavation areas. Where necessary appropriate protection measures may be taken to avoid erosion of the spread topsoil layer. Grass and trees may be replanted as directed by the Engineer.

Work Method

The Contractor may chose Labour, Equipment or a combination of both to carry out this Item depending on the degree of difficulty of the work.

Quality Control

The Engineer shall check that the required measures have been satisfactorily taken.

Measurement and Payment: Dayworks

Payment shall be made on a daywork basis for the labour and equipment as directed by the Engineer.
SECTION 22: DAYWORKS

This section covers provisional items included in the Bills of Quantities to cover the payment of equipment, labour and materials for work instructed by the Engineer on a daywork basis.

22-001: Dayworks

Measurement and Payment

a. Equipment:

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

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

b. Labour

Payment shall only be made for the time each of worker labour is actually working on the daywork instructed by the Engineer. The rate for labour shall include the cost of the following:-

i. All salaries allowances and other payments required by the worker
ii. Provision of small tools used on dayworks such as picks, shovels, pangas, jembes hammers chisels and all other tools used by tradesmen.
iii. Insurance, overheads and profit.

c. Materials

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

Schedule of Dayworks

The Engineer will compile a schedule of Equipment labour and materials likely to be instructed for dayworks for each project. This will be included in the project bill of quantities.

SECTION 25: HIV/AIDS AWARENESS AND PREVENTION CAMPAIGN

Scope:
This specification sets out the Contractors obligations with regard to on site HIV / AIDS awareness campaign and preventive measures that are to be instituted.

a. **HIV / AIDS Awareness Campaign**

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

As part of the campaign the Contractor will be required to 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.

b. **AIDS Prevention Campaign**

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

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

**Measurement and Payment**

The payment items in this clause shall include full compensation for all work associated with the provision of HIV / AIDS related services as specified.

i. **Instituting an HIV / AIDS awareness campaign:**  month

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

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

ii. **Instituting an HIV / AIDS prevention campaign:**  month

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

The tendered rate shall include full compensation for equipment, labour and material, including the distribution of condoms, required for the provision of the service.
SECTION V

DRAWINGS AND BILLS OF QUANTITIES
NOTE:
- ALL SPECIFIED DIMENSIONS IN m.
- TRAFFIC LEVELS OF MORE THAN 200 VPD MAY
FIGURE C.2 - CROSS SECTION B (REDUCED CROSS-SECTION)

NOTE: - ALL SPECIFIED DIMENSIONS IN m.
Gravel Layer - 0.10 compacted (0.20 on special sections)

Backslope
Min. 3 : 2
Max. 3 : 1

0.3

0.4

1.0

Carriageway 4.50

0.40 1.0

0.3

2.2

8%
FIGURE C.3 - MITRE DRAINS
FIGURE C.5 - DIMENSIONS OF SCOUR CHECKS FOR STANDARD DRAIN

- **Stone Weight:** Min. 10 kg
- **Stake Diameter:** Min. 0.10 m
FIGURE C.6 - MASONRY SCOUR CHECKS

A SECTION OF MASONRY SCOUR

PLAN OF DRAIN WITH EROSION CHECKS

<table>
<thead>
<tr>
<th>Cross-Section</th>
<th>Sizes in mm</th>
<th>Excav. (m³)</th>
<th>Stone masonry (m³)</th>
<th>Apron stone pitching (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Depth</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>2400</td>
<td>200</td>
<td>550</td>
<td>0.22</td>
</tr>
<tr>
<td>B</td>
<td>2000</td>
<td>200</td>
<td>500</td>
<td>0.18</td>
</tr>
</tbody>
</table>
NOTE:

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

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

An example code of “B2” would therefore stand for a drop inlet type structure to be built in stone masonry.
**Figure C.8**

**HEADWALL TYPE 1**

**HEAD AND WINGWALLS**

**DIMENSIONS AND MATERIAL REQUIREMENTS**

<table>
<thead>
<tr>
<th>PIPE DIAMETER IN (M)</th>
<th>TYPE A (CONCRETE BLOCKS)</th>
<th>TYPE B (STONE MASONRY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>450</td>
<td>600</td>
</tr>
<tr>
<td>DIMENSION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a FOUNDATION</td>
<td>0.30</td>
<td>0.30</td>
</tr>
<tr>
<td>b FOUNDATION</td>
<td>0.30</td>
<td>0.30</td>
</tr>
<tr>
<td>c FOUNDATION</td>
<td>2.20</td>
<td>2.35</td>
</tr>
<tr>
<td>d APRON</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>e APRON</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>f WALL</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>g WALL</td>
<td>0.30</td>
<td>0.30</td>
</tr>
<tr>
<td>h WALL</td>
<td>1.15</td>
<td>1.15</td>
</tr>
<tr>
<td>i WALL</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>k APRON</td>
<td>1.05</td>
<td>1.20</td>
</tr>
<tr>
<td>CULVERT PIPES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-SECTION WIDTH</td>
<td>No. of Pipes</td>
<td></td>
</tr>
<tr>
<td>4.50</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>5.50</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>6.50</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>MATERIAL REQUIREMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOUNDATION (Concrete)</td>
<td>m³</td>
<td>0.3</td>
</tr>
<tr>
<td>HEAD/WINGWALLS (Concrete/Masonry)</td>
<td>m³</td>
<td>0.4</td>
</tr>
<tr>
<td>APRON (Concrete)</td>
<td>m³</td>
<td>0.33</td>
</tr>
</tbody>
</table>
**FIGURE C.9**

**HEADWALL TYPE 2 (DROP INLET)**

**DIMENSIONS AND MATERIAL REQUIREMENTS**

<table>
<thead>
<tr>
<th>PIPE DIAMETER IN (M)</th>
<th>TYPE A (CONCRETE BLOCKS)</th>
<th>TYPE B (STONE MASONRY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>DIMENSION</td>
<td>UNIT</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>FOUNDATION</td>
<td>m</td>
</tr>
<tr>
<td>b</td>
<td>FOUNDATION</td>
<td>m</td>
</tr>
<tr>
<td>c</td>
<td>FOUNDATION</td>
<td>m</td>
</tr>
<tr>
<td>d</td>
<td>APRON</td>
<td>m</td>
</tr>
<tr>
<td>e</td>
<td>APRON</td>
<td>m</td>
</tr>
<tr>
<td>f</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>g</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>h</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>i</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>k</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>l</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
<tr>
<td>m</td>
<td>DROP INLET</td>
<td>m</td>
</tr>
</tbody>
</table>

**MATERIAL REQUIREMENT**

| FOUNDATION (Concrete) | m³ | 0.47 | 0.47 | 0.52 | 0.72 | 0.72 | 0.79 |
| HEAD / WING WALLS (Concrete/Masonry) | m³ | 0.53 | 0.69 | 1.11 | 1.24 | 1.63 | 2.61 |
| APRON (Concrete) | m³ | 0.24 | 0.24 | 0.30 | 0.24 | 0.24 | 0.30 |
FIGURE C.10 - HEADWALL TYPE 3A (CONCRETE BLOCK HEADWALLS)
FIGURE C.11 - HEADWALL TYPE 3B (STONE MASONRY HEADWALLS)

### Table: Material Requirement

<table>
<thead>
<tr>
<th>Pipe Diameter in (m)</th>
<th>Type B (Concrete Blocks)</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
<th>Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>g</td>
<td>h</td>
<td>i</td>
<td>m</td>
<td>(Concrete 1:3:6)</td>
<td>m³</td>
</tr>
<tr>
<td>0.40</td>
<td></td>
<td>0.40</td>
<td>0.30</td>
<td>1.70</td>
<td>0.90</td>
<td>0.40</td>
<td>0.30</td>
<td>0.80</td>
<td>0.69</td>
<td>0.30</td>
<td>1.20</td>
<td>(Concrete 1:3:6)</td>
<td>0.19</td>
</tr>
<tr>
<td>0.50</td>
<td></td>
<td>0.50</td>
<td>0.40</td>
<td>1.80</td>
<td>1.00</td>
<td>0.50</td>
<td>0.40</td>
<td>0.90</td>
<td>0.75</td>
<td>0.40</td>
<td>1.30</td>
<td>(Concrete 1:3:6)</td>
<td>0.22</td>
</tr>
</tbody>
</table>

**Overfill:**
- min. = 3/4
- max. = 0.40

**Flush to earth:**
- Variable

**Concrete:**
- Type 1:3:6
- Type 1:2:4

**Notes:**
- Overfill: min. = 3/4
- Flush to earth: variable
- Concret:
  - Type 1:3:6
  - Type 1:2:4

**Dimensions:**
- a: 0.40
- b: 0.30
- c: 1.70
- d: 0.90
- e: 0.40
- f: 0.30
- g: 0.80
- h: 0.69
- i: 0.30
- m: 1.20

**Material Requirement:**
- (Concrete 1:3:6) m³ = 0.19
- (Concrete 1:2:4) m³ = 0.22
### FIGURE C.12 - HEADWALL TYPE 4 (FOR ACCESS CULVERTS)

#### DIMENSIONS AND MATERIAL REQUIREMENTS

<table>
<thead>
<tr>
<th>PIPE DIAMETER IN (M)</th>
<th>TYPE A</th>
<th>TYPE B</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>[CONCRETE BLOCKS]</td>
<td>[STONE MASONRY]</td>
</tr>
<tr>
<td></td>
<td>450</td>
<td>600</td>
</tr>
<tr>
<td><strong>DIMENSION</strong></td>
<td><strong>UNIT</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>FOUNDATION m</td>
<td>0.30</td>
</tr>
<tr>
<td>b</td>
<td>FOUNDATION m</td>
<td>0.30</td>
</tr>
<tr>
<td>c</td>
<td>APRON</td>
<td>1.34</td>
</tr>
<tr>
<td>d</td>
<td>APRON</td>
<td>0.60</td>
</tr>
<tr>
<td>e</td>
<td>APRON</td>
<td>0.20</td>
</tr>
<tr>
<td>f</td>
<td>WINGWALLS m</td>
<td>0.20</td>
</tr>
<tr>
<td>g</td>
<td>WINGWALLS m</td>
<td>0.10</td>
</tr>
<tr>
<td>h</td>
<td>HEADWALLS m</td>
<td>0.69</td>
</tr>
<tr>
<td>i</td>
<td>HEADWALLS m</td>
<td>0.20</td>
</tr>
<tr>
<td>j</td>
<td>HEADWALLS m</td>
<td>0.65</td>
</tr>
<tr>
<td>k</td>
<td>HEADWALLS m</td>
<td>0.40</td>
</tr>
<tr>
<td><strong>MATERIAL REQUIREMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOUNDATION</td>
<td>(Concrete 124:1:36) m³</td>
<td>0.18</td>
</tr>
<tr>
<td>HEAD/WINGWALLS</td>
<td>(Concrete/Masonry) m³</td>
<td>0.25</td>
</tr>
<tr>
<td>APRON</td>
<td>(Concrete) m³</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Overfill: min. = 3/4

**PLAN**

Concre

**DIMENSION**

| a | FOUNDATION m |
| b | FOUNDATION m |
| c | APRON |
| d | APRON |
| e | APRON |
| f | WINGWALLS m |
| g | WINGWALLS m |
| h | HEADWALLS m |
| i | HEADWALLS m |
| j | HEADWALLS m |
| k | HEADWALLS m |
| l | HEADWALLS m |

**MATERIAL REQUIREMENT**

| FOUNDATION           | (Concrete 124:1:36) m³ | |
| HEAD/WINGWALLS       | (Concrete/Masonry) m³  | |
| APRON                | (Concrete) m³          | |
**FIGURE C.13 - BEDDING AND HAUNCH PROFILES TYPES I & II**

**PROFILE I**

(CONCRETE)

<table>
<thead>
<tr>
<th>Diameter (D)</th>
<th>450 (mm)</th>
<th>600 (mm)</th>
<th>900 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions in (m)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>0.15</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>b</td>
<td>0.1</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>c</td>
<td>0.86</td>
<td>1.12</td>
<td>1.48</td>
</tr>
<tr>
<td>d</td>
<td>0.56</td>
<td>0.72</td>
<td>1.08</td>
</tr>
<tr>
<td>e</td>
<td>0.14</td>
<td>0.18</td>
<td>0.27</td>
</tr>
<tr>
<td>f (min.)</td>
<td>0.34</td>
<td>0.45</td>
<td>0.68</td>
</tr>
<tr>
<td>g</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>h</td>
<td>0.24</td>
<td>0.33</td>
<td>0.42</td>
</tr>
<tr>
<td>i</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Concrete</td>
<td>Volume in (m3/m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.16</td>
<td>0.3</td>
<td>0.48</td>
</tr>
</tbody>
</table>

**Application**
- Fair subgrade condition;
- Overfill > ¾ Diameter;
- Seasonal waterflow only.

**Remarks**
- Use gravel material for back/overfill.

**PROFILE II**

(CONCRETE)

<table>
<thead>
<tr>
<th>Diameter (D)</th>
<th>450 (mm)</th>
<th>600 (mm)</th>
<th>900 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions in (m)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>0.15</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>b</td>
<td>0.1</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>c</td>
<td>0.86</td>
<td>1.12</td>
<td>1.48</td>
</tr>
<tr>
<td>d</td>
<td>0.56</td>
<td>0.72</td>
<td>1.08</td>
</tr>
<tr>
<td>e</td>
<td>0.14</td>
<td>0.18</td>
<td>0.27</td>
</tr>
<tr>
<td>f (min.)</td>
<td>0.34</td>
<td>0.45</td>
<td>0.68</td>
</tr>
<tr>
<td>g</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>h</td>
<td>0.24</td>
<td>0.33</td>
<td>0.42</td>
</tr>
<tr>
<td>i</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Concrete</td>
<td>Volume in (m3/m)</td>
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<td></td>
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<tr>
<td></td>
<td>0.16</td>
<td>0.3</td>
<td>0.48</td>
</tr>
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</table>

**Application**
- Fair to poor subgrade Condition;
- Overfill > ¾ Diameter;
- Seasonal waterflow only.

**Remarks**
- Use gravel material for back/overfill.
### FIGURE C.14 - BEDDING AND HAUNCH PROFILES TYPES III & IV

#### PROFILE III (CONCRETE)

<table>
<thead>
<tr>
<th>Diameter (D)</th>
<th>450 (mm)</th>
<th>600 (mm)</th>
<th>900 (mm)</th>
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</thead>
<tbody>
<tr>
<td>Dimensions in (m)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>0.15</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>b</td>
<td>0.1</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>c</td>
<td>0.86</td>
<td>1.12</td>
<td>1.48</td>
</tr>
<tr>
<td>d</td>
<td>0.56</td>
<td>0.72</td>
<td>1.08</td>
</tr>
<tr>
<td>e</td>
<td>0.42</td>
<td>0.54</td>
<td>0.81</td>
</tr>
<tr>
<td>f (min.)</td>
<td>0.23</td>
<td>0.3</td>
<td>0.45</td>
</tr>
<tr>
<td>g</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>h</td>
<td>0.52</td>
<td>0.69</td>
<td>0.96</td>
</tr>
<tr>
<td>i</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Concrete Volume in (m³/m)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.26</td>
<td>0.47</td>
<td>0.71</td>
</tr>
</tbody>
</table>

**Application**
- Fair subgrade condition;
- Overfill > ¾ Diameter;
- Seasonal waterflow only.

**Remarks**
- Use gravel material for back/overfill.

#### PROFILE IV (CONCRETE)

<table>
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<th>450 (mm)</th>
<th>600 (mm)</th>
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<tbody>
<tr>
<td>Dimensions in (m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>0.15</td>
<td>0.2</td>
</tr>
<tr>
<td>b</td>
<td>0.1</td>
<td>0.15</td>
</tr>
<tr>
<td>c</td>
<td>0.86</td>
<td>1.12</td>
</tr>
<tr>
<td>d</td>
<td>0.56</td>
<td>0.72</td>
</tr>
<tr>
<td>e</td>
<td>0.42</td>
<td>0.54</td>
</tr>
<tr>
<td>f (min.)</td>
<td>0.23</td>
<td>0.3</td>
</tr>
<tr>
<td>g</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>h</td>
<td>0.52</td>
<td>0.69</td>
</tr>
<tr>
<td>i</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Concrete Volume in (m³/m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.26</td>
<td>0.47</td>
</tr>
</tbody>
</table>

**Application**
- Fair to poor subgrade Condition;
- Overfill > ¾ Diameter;
- Seasonal waterflow only.

**Remarks**
- Use gravel material for back/overfill.
### FIGURE C.15 ACCESS DRIFT

**QUANTITIES TABLE**

<table>
<thead>
<tr>
<th>Cross section</th>
<th>DIMENSIONS</th>
<th>Excavation (m³)</th>
<th>Stone masonry (m³)</th>
<th>150mm Grouted stone pitching (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>A</td>
<td>4000</td>
<td>1800</td>
<td>600</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>1800</td>
<td>600</td>
<td>1800</td>
</tr>
<tr>
<td>B</td>
<td>4000</td>
<td>1400</td>
<td>400</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>1400</td>
<td>400</td>
<td>1800</td>
</tr>
</tbody>
</table>
1. The type of sign required and their location shall be as shown on the improvement plan and as directed by the Engineer.
2. Sign plate to be 2 mm thick mild steel plate.
3. Sign post to be 50 mm internal diameter steel pipe with wall thickness of 3 mm.
4. Sign plate to fixed to steel tube by 4 Nos M10 bolts and 2 Nos 50 mm f fixing clamps/brackets.
5. Sign paints shall be reflective.
1. The wording of the project signboard and the location to be installed to be as directed by the Engineer.

2. Materials to be used for fabrication of signboard shall be pressure impregnated treated softwood timber sizes as indicated in the drawing.

3. Wording boards to be nailed to the posts using nails.
## CONTENTS

### PAGE

Preamble to bills of quantities .................................................................

**BILL OF QUANTITIES**

<table>
<thead>
<tr>
<th>Bill</th>
<th>Page</th>
</tr>
</thead>
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<tr>
<td>Bill 1</td>
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</tr>
<tr>
<td>Bill 2</td>
<td></td>
</tr>
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<td>Bill 4</td>
<td></td>
</tr>
<tr>
<td>Bill 5</td>
<td></td>
</tr>
<tr>
<td>Bill 8</td>
<td></td>
</tr>
<tr>
<td>Bill 10</td>
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</tr>
</tbody>
</table>

**Summary** ...........................................................................
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 Bill 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.

3. Each item in the B/Q contains only a brief description of the proposed work. Fuller details and directions 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.

4. The Quantities set forth in the Bill of Quantities are estimated and representing substantially the work to be carried out. There is no guarantee to the Contractor that he will be required to carry out all the quantities 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 work actually done in fulfilment of his obligation under the Contract.

5. Daywork items shall be expended in whole or in part at the discretion of the Employer.
<table>
<thead>
<tr>
<th>Activity Code</th>
<th>Description</th>
<th>Technology</th>
<th>Units</th>
<th>Planned Quantity</th>
<th>Bid Rate</th>
<th>Planned Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-003</td>
<td>General Office administration and Overheads and relocation of Electricity poles (each pole 250,000)</td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-004</td>
<td>Percentage of PC sum in item 01-50-003 for the contractors overheads and profits.</td>
<td>---</td>
<td>KS</td>
<td></td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>01-007</td>
<td>Allow a PC sum for Engineer's ans Supervisory Allowance.</td>
<td>---</td>
<td>KS</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-008</td>
<td>Percentage of PC sum in item 01-50-007 for the contractors overheads and profits.</td>
<td>---</td>
<td>KS</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-007</td>
<td>Allow a PC sum for provision of Survey</td>
<td>---</td>
<td>KS</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-008</td>
<td>Percentage of PC sum in item 01-50-007 for the contractors overheads and profits.</td>
<td>---</td>
<td>KS</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-50-007</td>
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<td>---</td>
<td>KS</td>
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</tr>
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<td></td>
<td>Allow for Material Testing</td>
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<td>Activity Code</td>
<td>Description</td>
<td>Technology</td>
<td>Units</td>
<td>Planned Quantity</td>
<td>Bid Rate</td>
<td>Planned Amount</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>------------------</td>
<td>----------</td>
<td>----------------</td>
</tr>
<tr>
<td>05-50-002</td>
<td>Excavate to level in soft material and compact as directed by the Engineer.</td>
<td>MB</td>
<td>M³</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-003</td>
<td>Excavate in Hard Material and Compact as directed by the Engineer.</td>
<td>MB</td>
<td>M³</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-006</td>
<td>Provide and fill in soft and compact in layers of 150mm to 100% MDD (AASHTO T99)</td>
<td>MB</td>
<td>M²</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-016</td>
<td>Scarify, water and compact existing ground to at least 95% MDD (AASHTO T99) to a depth of 150mm below ground level.</td>
<td>MB</td>
<td>M</td>
<td>1200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity Code</td>
<td>Description</td>
<td>Technology</td>
<td>Units</td>
<td>Planned Quantity</td>
<td>Bid Rate</td>
<td>Planned Amount</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
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<td>BILL 12</td>
<td></td>
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<tr>
<td>12-50-002</td>
<td>Provide, Place, spread and compact approved natural base material for sub-base, stabilize with 5% cement, water, thoroughly mix and cure (form camber / superelevation)</td>
<td>MB</td>
<td>M³</td>
<td>960</td>
<td></td>
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<tr>
<td>12-50-003</td>
<td>Provide, Place, spread and compact approved natural base material for base, stabilize with 5% cement, water, thoroughly mix and cure (form camber / superelevation)</td>
<td>MB</td>
<td>M³</td>
<td>960</td>
<td></td>
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<tr>
<td>Activity Code</td>
<td>Description</td>
<td>Technology</td>
<td>Units</td>
<td>Planned Quantity</td>
<td>Bid Rate</td>
<td>Planned Amount</td>
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<tr>
<td>15-60-003</td>
<td>Provide, spread and roll 6/10mm pre-coated chippings.</td>
<td>MB</td>
<td>M³</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-60-005</td>
<td>Provide, spread and roll 14/20mm pre-coated chippings.</td>
<td>MB</td>
<td>M³</td>
<td>94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-92-001</td>
<td>Provide and spray MC 30 cutback bitumen as prime coat to carriageway,</td>
<td>MB</td>
<td>L</td>
<td>10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>shoulders, at a rate of 0.8-1.2 litres/m² as prime coat.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15-92-002</td>
<td>provide, heat and spray 80/100 pen-grade bitumen for 1st seal on</td>
<td>MB</td>
<td>L</td>
<td>8,640</td>
<td></td>
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<td></td>
<td>carriageway at a rate of 0.9-1.2 litres/m²</td>
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<tr>
<td>15-90-003</td>
<td>Provide, heat and spray 80/100 pen-grade for 2nd seal on carriageway</td>
<td>MB</td>
<td>L</td>
<td>7,200</td>
<td></td>
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<tr>
<td></td>
<td>at a rate of 0.8-1.0 litres/m²</td>
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<tr>
<td>Activity Code</td>
<td>Description</td>
<td>Technology</td>
<td>Units</td>
<td>Planned Quantity</td>
<td>Bid Rate</td>
<td>Planned Amount</td>
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<td>BILL 1</td>
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<td>BILL 5</td>
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<td>BILL 12</td>
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<td>BILL 15</td>
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<td>SUB TOTAL (AS PER BQ)</td>
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<td>ADD 16% VAT</td>
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<td>TOTAL</td>
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<td>ADD 10% CONTINGENCY</td>
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<tr>
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<td>GRAND TOTAL</td>
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SECTION VI

STANDARD FORMS

List of Standard Forms

(i) Form of Tender

(ii) Letter of Acceptance

(iii) Form of Agreement

(iv) Form of Tender Security

(v) Performance Bank Guarantee

(vi) Performance Bond

(vii) Tender Questionnaire

(xi) Confidential Business Questionnaire

(xii) Details of Sub-Contractors

(xii) Letter of notification of award
MERU COUNTY GOVERNMENT

CONTRACT NO.

FORM OF TENDER

TO:

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities/Schedule of Rates for the execution of the above named 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)

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

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

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.

5. 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 tenders for and on behalf of

_________________________[Name of Tenderer] of
_________________________[Address of Tenderer]

Witness; Name_____________________________________

Address_____________________________________

Signature___________________________________
MERU COUNTY GOVERNMENT

LETTER OF ACCEPTANCE

_______________________ [date]

To: _______________________
    [name of the Contractor]
    _______________________
    [address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated ____________________________
for the ROUTNE MAINTANANCE WORKS, CONTRACT NO..........................
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 : Agreement
MERU COUNTY GOVERNMENT

CONTRACT NO.

FORM OF AGREEMENT

THIS AGREEMENT, made the ____________ day of ________ 2013 between the MERU COUNTY GOVERNMENT (hereinafter called “the Employer”) of the one part AND
____________________________________________
whose registered office is situated at
_________________________________________
(hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes ROUTINE MAINTANANCE WORKS, CONTRACT NO………………… (hereinafter called “the Works”) located at the MERU COUNTY GOVERNMENT and the Employer has accepted the tender submitted by the Contractor for the execution and completion of such Works and the remedying of any defects therein for the Contract Price of Kshs__________________________[Amount in figures], Kenya Shillings__________________________[Amount in words].

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. 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.

2. The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e.

   (i) Letter of Acceptance
   (ii) Form of Tender
   (iii) Conditions of Contract and Appendix to Conditions of Contract
   (iv) Specifications
   (v) Drawings
   (vi) Priced Bills of Quantities/Priced Schedule of Rates[whichever is applicable]

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The common Seal of _________________________________

Was hereunto affixed in the presence of _______________________

Signed Sealed, and Delivered by the said ______________________

Binding Signature of Employer _____________________________

Binding Signature of Contractor _____________________________

In the presence of  (i) Name___________________________

Address_______________________________________

Signature______________________________________

[ii] Name ______________________________________

Address_______________________________________

Signature______________________________________
MERU COUNTY GOVERNMENT

CONTRACT NO.

FORM OF TENDER SECURITY

WHEREAS ...........................................(hereinafter called “the Tenderer”) has submitted his tender dated ................................ for the contract No ..........................................

KNOW ALL PEOPLE by these presents that WE ................................ having our registered office at .....................(hereinafter called “the Bank”), are bound unto ...........................................(hereinafter called “the Employer”) in the sum of Kshs......................... for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this ............... Day of ........2009

THE CONDITIONS of this obligation are:

1. If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers
   Or

2. If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

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

This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

___________________________  ______________________________
[signature of the Bank]       [date]

___________________________  ______________________________
[witness]                     [seal]
TO:

Dear Sir,

WHEREAS ______________________ (hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No.…………………………………….. dated _________ to execute…………………………………….. (hereinafter called “the Works”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Kshs. ________________ (amount of Guarantee in figures) Kenya Shillings_________________ (amount of Guarantee in words), and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings ________________ (amount of Guarantee in words) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR ___________________

Name of Bank ____________________________________________
Address ________________________________________________
Date ____________________________________________________
MERU COUNTY GOVERNMENT

CONTRACT NO.

PERFORMANCE BOND

By this Bond, We______________________________of (or whose registered office is situated at)__________________________
as Principal (hereinafter called “the Contractor”) and __________________________________________________________
of[or whose registered office is situated at]__________________________
as Surety (hereinafter called “the Surety”), are held and firmly bound unto
_________________________________________________________________________
of[or whose registered office is situated at]___________________________________________________________________
as Obligee (hereinafter called “the Employer”) in the amount of
Kshs.______________________________
[amount of Bond in figures]
Kenya Shillings
____________________________________________________________________________
[amount of Bond in words], for the payment of which sum well and truly, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a Contract with the Employer dated the __________________ day of ____________ 20 ____________ for the execution of contract No. ____________________________ in accordance with the Contract documents, Specifications and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer’s obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) complete the Contract in accordance with its terms and conditions; or

(2) obtain a tender or tenders from qualified tenderers for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive tenderer, arrange for a Contract between such tenderer and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof.
The term “Balance of the Contract Price”, as used in this paragraph, shall mean the total amount payable by the Employer to the Contractor under the Contract, less the amount properly paid by the Employer to the Contractor; or

(3) pay the Employer the amount required by the Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of issuance of the Certificate of Completion.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors and assigns of the Employer.

In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this __________________________ day of __________________________ 20________

SIGNED ON _________________________ SIGNED ON _____________________

On behalf of _____________________ On behalf of _____________________
[title] _____________________ [title] _____________________

By ________________________________ By ________________________________

In the capacity of _____________________ In the capacity of ______________

In the presence of;Name _______________In the presence of;Name___________

Address___________ Address____

Signature___________ Signature____

Date_________________ Date________
MERU COUNTY GOVERNMENT

CONTRACT NO.

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names 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. Telex of tenderer;

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

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. This is essential if the tenderer does not have his registered address in Kenya (name, address, telephone, telex);

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

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

_______________________
Signature of Tenderer
MERU COUNTY GOVERNMENT

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 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; Country/Town..........................................................

Plot No........................................ Street/Road ..................................................

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

Nature of Business....................................................................................................

Current Trade Licencee No...................... Expiring date.........................

Maximum value of business which you can handle at any time: K. pound................

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:

<table>
<thead>
<tr>
<th>Name in full</th>
<th>Nationality</th>
<th>Citizenship Details</th>
<th>Shares</th>
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<tr>
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</table>
LETTER OF NOTIFICATION OF AWARD

MERU COUNTY GOVERNMENT

P.O BOX 120

MERU

To:_______________

_______________

_______________

__________________________________________________

RE: Tender No._______________

Tender Name_______________

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

__________________________________________________

1. Please acknowledge receipt of this letter of notification signifying your acceptance.

2. The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.

3. You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS)__________________________________________

___________________________________________________________

SIGNED________________________

County Secretary