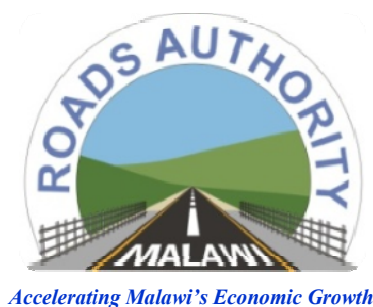


# GOVERNMENT OF THE REPUBLIC OF MALAWI



## ROADS AUTHORITY

### Bidding Document for the Procurement of Works

#### National Competitive Bidding

#### 2025-2026 FINANCIAL YEAR

Subject of Procurement	Grading and Associated Drainage Works in Mzimba District
Procurement Reference Number	RA/MAI/2025-26/NR/MZ/03
Procurement Method	National Competitive Bidding
Date of Issue of Bidding Document	30 <sup>th</sup> April 2025

## Volume I

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## Section 1: Instructions to Bidders

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# **Section I. Instructions to Bidders**

## **A. General**

### **1. Scope of Bid**

- 1.1 The Procuring Entity indicated in the Special Conditions of Contract (SCC), invites bids for the construction of Works, as described in Section 6, Schedule of Requirements. The subject and procurement reference number are provided in the SCC.
- 1.2 The successful Bidder will be expected to complete the Works by the Intended Completion Date specified in the SCC.

### **2. Source of Funds**

- 2.1 The Procuring Entity indicated in the SCC has an approved budget from public funds towards the cost of the procurement described in Section 6, Schedule of Requirements and intends to use these funds to cover eligible payments under the Contract. Payments will be made directly by the Procuring Entity and will be subject in all respects to the terms and conditions of the resulting Contract placed by the Procuring Entity.

### **3. Eligible Bidders**

- 3.1 A bidder shall:
  - (a) have the legal capacity to enter into a contract;
  - (b) not be insolvent, in receivership, bankrupt or being wound up, not have had their business activities suspended and not be the subject of legal proceedings for any of the foregoing; and
  - (c) have fulfilled their obligations to pay taxes according to the tax laws of their country of registration.
- 3.2 In order to demonstrate compliance with the criteria in ITB Sub-Clause 3.1, a Bidder shall submit with its Bid either:
  - (a) its certificate of Contractor Registration from the National Construction Industry Council demonstrating its registered supplier status; or
  - (b) appropriate documentary evidence demonstrating its compliance.
- 3.3 Bidding is open to all bidders from eligible countries as defined in Section 5, Eligible Countries. All materials, equipment and services to be used in the performance of the Contract shall have their origin in an eligible country, as defined in Section 5, Eligible Countries.
- 3.4 A bidder shall be required to obtain a certificate of registration from the National Construction Industry Council demonstrating registered supplier status, as a condition of contract award.
- 3.5 All bidders shall provide in Section 4, Bidding Forms, a statement that the Bidder (including all members of a joint venture and subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or

being proposed as Project Manager for the Contract. A firm that has been engaged by the Procuring Entity to provide consulting services for the preparation or supervision of the Works, and any of its affiliates, shall not be eligible to bid.

- 3.6 Government-owned enterprises in the Republic of Malawi may only participate if they are legally and financially autonomous, operate under commercial law, and are not a dependent agency to the Procuring Entity.
- 3.7 A Bidder that has been debarred from participating in public procurement in accordance with ITB Sub-Clause 36.1(c), at the date of the deadline for bid submission or thereafter, shall be disqualified.

#### **4. Qualification of the Bidder**

- 4.1 All bidders shall provide in the Qualification Information Form in Section 4, Bidding Forms, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 4.2 In the event that prequalification of potential bidders has been undertaken, only bids from prequalified bidders will be considered for award of Contract. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally-submitted prequalification information remains essentially correct as of the date of bid submission. The update or confirmation should be provided in the Qualification Information Form in Section 4, Bidding Forms.
- 4.3 If the Procuring Entity has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids, using the Qualification Information Form in Section 4, Bidding Forms, unless otherwise stated in Section 3, Evaluation and Qualification Criteria:
  - (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business or a copy of the Bidder's registration certificate where such documents have been provided to obtain registered supplier status; written power of attorney of the signatory of the Bid to commit the Bidder;
  - (b) total monetary value of construction work performed for each of the last five (5) years;
  - (c) experience in works of a similar nature and size for each of the last five (5) years, and details of work under way or contractually committed; and clients who may be contacted for further information on those contracts;
  - (d) major items of construction equipment proposed to carry out the Contract;
  - (e) qualifications and experience of key site management and technical personnel proposed for the Contract;
  - (f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five (5) years;
  - (g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
  - (h) authority to seek references from the Bidder's bankers;
  - (i) information regarding any litigation, current or during the last five (5) years, in which the Bidder is involved, the parties concerned, and disputed amount; and

- (j) proposals for subcontracting components of the Works amounting to more than ten (10) percent of the Contract Price.
- 4.4 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated in Section 3, Evaluation and Qualification Criteria:
- (a) the Bid shall include all the information listed in Sub-Clause 4.3 above for each joint venture partner;
  - (b) the Bid shall be signed so as to be legally binding on all partners;
  - (c) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
  - (d) one of the partners will be nominated as being in charge, authorised to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
  - (e) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.
- 4.5 To qualify for award of the Contract, bidders shall meet the minimum qualifying criteria specified in Section 3, Evaluation and Qualification Criteria.
- 4.6 Bidders applying for eligibility for a margin of preference in bid evaluation, if permitted in the Bid Data Sheet, shall supply all information to satisfy the criteria for eligibility as described in Section 3, Evaluation and Qualification Criteria.

## **5. One Bid per Bidder**

- 5.1 Each Bidder shall submit only one Bid, either individually or as a partner in a joint venture. A Bidder who submits or participates in more than one Bid (other than as a subcontractor) will cause all the proposals with the Bidder's participation to be disqualified.

## **6. Cost of Bidding**

- 6.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Procuring Entity will in no case be responsible or liable for those costs.

## **7. Site Visit**

- 7.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.2 Details of any Pre-Bid Meeting or Site Visit to be held by the Procuring Entity are given in the BDS.

# **B. Bidding Documents**

## **8. Content of Bidding Documents**

- 8.1 The set of bidding documents comprises the documents listed in the table below and



addenda issued in accordance with Clause 10:

**PART 1 Bidding Procedures**

- Section 1 Instructions to Bidders (ITB)
- Section 2 Bid Data Sheet (BDS)
- Section 3 Evaluation and Qualification Criteria
- Section 4 Bidding Forms
- Section 5 Eligible Countries

**PART 2 Schedule of Requirements**

- Section 6(A) – Scope of Works
- Section 6(B) – Technical Specifications
- Section 6(C) – Drawings
- Section 6(D) – Bills of Quantities (or Activity Schedule)

**PART 3 Contract**

- Section 7 General Conditions of Contract (GCC)
- Section 8 Special Conditions of Contract (SCC)
- Section 9 Contract Forms

**9. Clarification of Bidding Documents**

- 9.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Procuring Entity in writing at the Procuring Entity's address indicated in the BDS. The Procuring Entity will respond to any request for clarification received earlier than fourteen (14) days prior to the deadline for submission of bids. Copies of the Procuring Entity's response will be forwarded to all Bidders, including a description of the inquiry, but without identifying its source.

**10. Amendment of Bidding Documents**

- 10.1 Before the deadline for submission of bids, the Procuring Entity may modify the bidding documents by issuing addenda.
- 10.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing to all purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Procuring Entity.
- 10.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Procuring Entity shall extend, as necessary, the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

**C. Preparation of Bids**

**11. Language of Bid**

- 11.1 All documents relating to the Bid shall be in English. Any printed literature furnished by the Bidder may be written in another language, as long as such literature is accompanied by a translation of its pertinent passages in English; in which case, for purposes of interpretation of the Bid, the translation shall govern.

## **12. Documents Comprising the Bid**

- 12.1 The Bid submitted by the Bidder shall comprise the following, in the format indicated in Section 4, Bidding Forms, where appropriate:
- (a) Bid Submission Form;
  - (b) Bid Security;
  - (c) Priced Bill of Quantities or Activity Schedule;
  - (d) Qualification Information Form and Documents; and
  - (e) any other document or information required to be completed and submitted by bidders, as specified in the BDS.

## **13. Bid Prices**

- 13.1 The Contract will be an Admeasurement or Lump Sum Contract, as indicated in the BDS.
- 13.2 The Contract shall be for the whole Works, as described in ITB Sub-Clause 1.1, based on the:
- (a) priced Bill of Quantities submitted by the Bidder in the case of an Admeasurement Contract; or
  - (b) priced Activity Schedule submitted by the Bidder in the case of a Lump Sum Contract.
- 13.3 The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities (or in the case of a lump sum contract, for all items of the Works described in the drawings and specifications and listed in the Activity Schedule). Items for which no rate or price is entered by the Bidder will not be paid for by the Procuring Entity when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities or Activity Schedule.
- 13.4 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause shall be included in the rates, prices and total Bid price (or in the case of a lump sum contract, in the total bid price) submitted by the Bidder.
- 13.5 The rates and prices (or in the case of a lump sum contract, the lump sum price) quoted by the Bidder shall not be subject to adjustment during the performance of the Contract unless provided for in the BDS and SCC and the provisions of Clause 47 of the Conditions of Contract. The Bidder shall submit with the Bid all the information required under the SCC and Clause 47 of the Conditions of Contract.

## **14. Currencies of Bid and Payment**

- 14.1 The unit rates and prices (or in the case of a lump sum contract, the lump sum price)

shall be quoted by the Bidder entirely in Malawi Kwacha.

## **15. Bid Validity**

- 15.1 Bids shall remain valid for the period specified in the BDS.
- 15.2 In exceptional circumstances, the Procuring Entity may request that the bidders extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. A Bidder may refuse the request without forfeiting the Bid Security. A Bidder agreeing to the request will not be required or permitted to otherwise modify the Bid, but will be required to extend the validity of Bid Security for the period of the extension, and in compliance with Clause 16 in all respects.

## **16. Bid Security**

- 16.1 The Bidder shall furnish, as part of the Bid, a Bid Security in original form in Malawi Kwacha in the amount specified in the BDS.
- 16.2 The Bid Security shall be in the form of a certified cheque or payable order, bank draft, letter of credit, or a bank guarantee from a financial institution operating in Malawi. The format of the Bid Security should be in accordance with the form of Bid Security included in Section 4, Bidding Forms or another form acceptable to the Procuring Entity. Bid Security shall be valid for twenty-eight (28) days beyond the validity of the Bid.
- 16.3 Any bid not accompanied by an acceptable Bid Security shall be rejected. The Bid Security of a joint venture must define as "bidder" all joint venture partners and list them in the following manner: a joint venture consisting of "\_\_\_\_\_", "\_\_\_\_\_", and "\_\_\_\_\_".
- 16.4 The Bid Security of unsuccessful bidders will be returned within one (1) week after concluding the contract and after a Performance Security has been furnished by the successful Bidder.
- 16.5 The Bid Security of the successful Bidder will be discharged when the Bidder has signed the contract and furnished the required Performance Security.
- 16.6 The Bid Security may be forfeited:
- (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
  - (b) if the Bidder does not accept the correction of the Bid price, pursuant to Clause 27; or
  - (c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to:
    - (i) sign the contract; or
    - (ii) furnish the required Performance Security.

## **17. Alternative Proposals by Bidders**

- 17.1 Bidders shall submit offers that comply with the requirements of the bidding documents, including the basic technical design as indicated in the drawings and specifications. Alternatives will not be considered unless specifically allowed in the BDS.

## **18. Format and Signing of Bid**

- 18.1 The Bidder shall prepare one original of the documents comprising the Bid as described in Clause 12 of these Instructions to Bidders, bound with the volume containing the Bid Submission Form, and clearly marked "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number specified in the BDS, and clearly marked as "COPIES." In the event of discrepancy between them, the original shall prevail.
- 18.2 The original and all copies of the Bid 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 Bidder, pursuant to Sub-Clauses 4.3(a) or 4.4(b), as the case may be. All pages of the Bid where entries or amendments have been made shall be initialled by the person or persons signing the Bid.
- 18.3 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Procuring Entity, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.
- 18.4 The Bidder shall furnish information as described in the Bid Submission Form on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

## **D. Submission of Bids**

### **19. Sealing and Marking of Bids**

- 19.1 The Bidder shall seal the original and all copies of the Bid in two inner envelopes and one outer envelope, duly marking the inner envelopes as "ORIGINAL" and "COPIES".
- 19.2 The inner and outer envelopes shall:
- (a) be addressed to the Procuring Entity at the address provided in the BDS;
  - (b) bear the name and procurement reference number of the Contract as defined in the BDS and SCC; and
  - (c) provide a warning not to open except in the presence of the Internal Procurement Committee and not to be opened before the specified time and date for Bid opening as defined in the BDS.
- 19.3 In addition to the identification required in Sub-Clause 19.2, the inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late, pursuant to Clause 21.
- 19.4 If the outer envelope is not sealed and marked as above, the Procuring Entity will assume no responsibility for the misplacement or premature opening of the Bid.

### **20. Deadline for Submission of Bids**

- 20.1 Bids shall be delivered to the Procuring Entity at the address specified in ITB Sub-Clause 19.2(a) above no later than the time and date specified in the BDS.
- 20.2 The Procuring Entity may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Procuring Entity and the bidders previously subject to the original deadline will then

be subject to the new deadline.

## **21. Late Bids**

- 21.1 Any Bid received by the Procuring Entity after the deadline prescribed in Clause 20 will be returned unopened to the Bidder.

## **22. Withdrawal, Substitution and Modification of Bids**

- 22.1 Bidders may withdraw, substitute or modify their bids by giving notice in writing before the deadline prescribed in Clause 20.
- 22.2 Each Bidder's withdrawal, substitution or modification notice shall be prepared, sealed, marked, and delivered in accordance with Clauses 18 and 19, with the outer and inner envelopes additionally marked "WITHDRAWAL", "SUBSTITUTION" or "MODIFICATION" as appropriate. The corresponding substitution or modification of the bid must accompany the written notice.
- 22.3 No Bid may be modified after the deadline for submission of Bids.
- 22.4 Withdrawal of a Bid between the deadline for submission of bids and the expiration of the period of Bid validity specified in the BDS or as extended pursuant to Sub-Clause 15.2 may result in the forfeiture of the Bid Security pursuant to Clause 16.
- 22.5 Bidders may only offer discounts to, or otherwise modify the prices of their bids by submitting Bid substitutions or modifications in accordance with this clause, or included in the original Bid submission.

## **E. Bid Opening and Evaluation**

### **23. Bid Opening**

- 23.1 The Procuring Entity will open the bids, including substitutions and modifications made pursuant to Clause 22, in the presence of the bidders' representatives who choose to attend at the time and in the place specified in the BDS.
- 23.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 22 shall not be opened. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding bid being substituted, and the substituted bid shall not be opened, but returned to the Bidder. . No bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorisation to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorisation to request the modification and is read out at bid opening.
- 23.3 The bidders' names, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, Bid modifications and withdrawals, the presence or absence of Bid Security, will all be announced by the Procuring Entity at the bid opening. Any such other details as the Procuring Entity may consider appropriate, will also be announced.

- 23.4 Bids, substitutions or modifications that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. In particular, any discount offered by a Bidder which is not read out at bid opening shall not be considered further.
- 23.5 The Procuring Entity will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.3. Copies of the minutes will be made available to any Bidder who requests them.
- 23.6 No bid will be rejected at bid opening except for late bids, which will be returned unopened to the bidder, pursuant to ITB Clause 21.

## **24. Process to be Confidential**

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

## **25. Clarification of Bids and Contacting the Procuring Entity**

- 25.1 To assist in the examination, evaluation and comparison of bids, the Procuring Entity may, at the Procuring Entity's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of unit rates (or in the case of a lump sum contract, the prices in the Activity Schedule). The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the bids in accordance with Clause 27.
- 25.2 Subject to sub-clause 25.1 no Bidder shall contact the Procuring Entity on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Procuring Entity, it should do so in writing.
- 25.3 Any effort by the Bidder to influence the Procuring Entity in the Procuring Entity's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.

## **26. Examination of Bids and Determination of Responsiveness**

- 26.1 Prior to the detailed evaluation of bids, the Procuring Entity will determine whether each Bid (a) meets the eligibility criteria defined in ITB Clause 3; (b) has been properly signed; (c) is accompanied by the required Bid Security; and (d) is substantially responsive to the requirements of the bidding documents.
- 26.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way,

inconsistent with the bidding documents, the Procuring Entity's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

- 26.3 If a Bid is not substantially responsive, it will be rejected by the Procuring Entity, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

## **27. Correction of Errors**

- 27.1 Bids determined to be substantially responsive will be checked by the Procuring Entity for any arithmetic errors.

- 27.2 Errors will be corrected by the Procuring Entity as follows:

- (a) For admeasurement contracts only, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
- (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

- 27.3 The amount stated in the Bid will be adjusted by the Procuring Entity in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and the Bid Security may be forfeited in accordance with Sub-Clause 16.6(b).

## **28. Currency for Bid Evaluation**

- 28.1 Bids will be evaluated as quoted in Malawi Kwacha.

## **29. Evaluation and Comparison of Bids**

- 29.1 The Procuring Entity will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 26.

- 29.2 In evaluating the bids, the Procuring Entity will determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:

- (a) making any correction for errors pursuant to Clause 27;
- (b) excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities or Activity Schedule, but including Daywork, where priced competitively;
- (c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with Clause 17; and



- (d) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub-Clause 22.5.

29.3 The Procuring Entity reserves the right to accept or reject any variation or deviation. Variations, deviations, and other factors which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Procuring Entity will not be taken into account in Bid evaluation.

### **30. Domestic Preference**

30.1 If so indicated in the BDS, domestic Bidders or other Bidders using Malawian nationals to carry out the works shall receive a margin of preference in Bid evaluation in accordance with the procedure and criteria specified in Section 3, Evaluation and Qualification criteria.

## **F. Award of Contract**

### **31. Award Criteria**

31.1 Subject to Clause 32, the Procuring Entity will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of Clause 3, and (b) qualified in accordance with the provisions of Clause 4.

### **32. Procuring Entity's Right to Accept and Bid and to Reject any or all Bids**

32.1 Notwithstanding Clause 31, the Procuring Entity reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring Entity's action.

### **33. Notification of Award and Signing of Agreement**

33.1 The Bidder whose Bid has been accepted will be notified of the award in writing by the Procuring Entity prior to expiration of the Bid validity period. This notification (hereinafter and in the General Conditions of Contract called the "Notice of Acceptance") will state the sum that the Procuring Entity will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price"). The Procuring Entity shall publish in the Malawi Government Gazette the results of the award of contract, as required by the Public Procurement Act 2003.

33.2 The notification of award will constitute the formation of the Contract, subject to the Bidder furnishing the Performance Security in accordance with Clause 34 and signing the contract in accordance with Sub-Clause 33.3.

33.3 The Contract will incorporate all agreements between the Procuring Entity and the successful Bidder. It will be signed by the Procuring Entity and sent to the successful Bidder, within twenty-eight (28) days following the notification of award. Within thirty (30) days of receipt, the successful Bidder will sign and date the Contract and deliver it



to the Procuring Entity.

- 33.4 Upon the furnishing by the successful Bidder of the Performance Security, the Procuring Entity will, within one (1) week, notify the other bidders that their bids have been unsuccessful.

#### **34. Performance Security**

- 34.1 Within thirty (30) days after receipt of the Notice of Acceptance, the successful Bidder shall deliver to the Procuring Entity a Performance Security in the form of a Bank Guarantee, or other form acceptable to the Procuring Entity in the amount and denominated in the type and proportions of currencies specified in the Special Conditions of Contract.
- 34.2 The Performance Security shall be issued by a financial institution operating in Malawi.
- 34.3 Failure of the successful Bidder to comply with the requirements of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

#### **35. Adjudicator**

- 35.1 The Procuring Entity proposes the person named in the BDS to be appointed as Adjudicator under the Contract, at an hourly fee specified in the BDS, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Notice of Acceptance, the Procuring Entity has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the SCC at the request of either party.

#### **36. Corrupt or Fraudulent Practices**

- 36.1 The Government of the Republic of Malawi (hereinafter called "the Government") requires that Procuring Entities, as well as Bidders and Suppliers under government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Government:
- (a) defines, for the purposes of this provision, the terms set forth below as follows:
    - (i) "corrupt practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
    - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
    - (iii) "collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish prices at artificial, noncompetitive levels; and
    - (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.
  - (b) will reject a recommendation for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt,

- fraudulent, collusive or coercive practices in competing for the contract in question;
- (c) will debar a Bidder from participation in public procurement for a specified period of time if it at any time determines that the firm has engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a contract.

## **Section 2. Bid Data Sheet**

## Section 2. Bid Data Sheet

Instructions to Bidders (ITB) reference	Data relevant to ITB									
A. General										
ITB 4.6 and ITB 30.1	<p>A margin of <b>20%</b> preference shall apply.</p> <p>The criteria for eligibility and the application methodology are described in Section 3 - Evaluation and Qualification Criteria.</p>									
ITB 7.2	<p>The Procuring Entity <b>Shall</b> hold a pre-bid meeting at Crossroads Hotel, Lilongwe Date: 9th May 2025<span style="float:right">Time: 09:00 Hours local time</span></p> <p>The pre-bid meeting <b>shall not be mandatory</b>.</p>									
B. Bidding Documents										
ITB 9.1	<p>For <b>clarification purposes</b> only, the Procuring Entity’s address is:</p> <p>The Chief Executive Officer <b>The Roads Authority</b> Attention:</p> <table><tr><th>Northern Region</th><th>Central Region</th><th>Southern Region</th></tr><tr><td>Regional Manager The Roads Authority Northern Region Office P O Box 20050 Mzuzu 2 Tel: +265 1 311 065 +265 888 355895</td><td>Regional Manager The Roads Authority Central Region Office ARET Premises along Mchinji Road P O Box 624 Lilongwe Tel: +265 1 759 896 +265 888209334</td><td>Regional Manager The Roads Authority Southern Region Office Lonhro Building P O Box 373 Blantyre Tel: +265 1 847 354 +265 888 843918</td></tr><tr><td><a href="mailto:fmkandawire@ra.org.mw">fmkandawire@ra.org.mw</a></td><td><a href="mailto:cmtawali@ra.org.mw">cmtawali@ra.org.mw</a></td><td><a href="mailto:fhauya@ra.org.mw">fhauya@ra.org.mw</a></td></tr></table>	Northern Region	Central Region	Southern Region	Regional Manager The Roads Authority Northern Region Office P O Box 20050 Mzuzu 2 Tel: +265 1 311 065 +265 888 355895	Regional Manager The Roads Authority Central Region Office ARET Premises along Mchinji Road P O Box 624 Lilongwe Tel: +265 1 759 896 +265 888209334	Regional Manager The Roads Authority Southern Region Office Lonhro Building P O Box 373 Blantyre Tel: +265 1 847 354 +265 888 843918	<a href="mailto:fmkandawire@ra.org.mw">fmkandawire@ra.org.mw</a>	<a href="mailto:cmtawali@ra.org.mw">cmtawali@ra.org.mw</a>	<a href="mailto:fhauya@ra.org.mw">fhauya@ra.org.mw</a>
Northern Region	Central Region	Southern Region								
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<a href="mailto:fmkandawire@ra.org.mw">fmkandawire@ra.org.mw</a>	<a href="mailto:cmtawali@ra.org.mw">cmtawali@ra.org.mw</a>	<a href="mailto:fhauya@ra.org.mw">fhauya@ra.org.mw</a>								
C. Preparation of Bids										
ITB 12.1 (e)	<p><b>The Bidder shall submit with its bid the following additional documents or information:</b></p> <ul style="list-style-type: none"><li>1) Academic Qualification Certificates (Certified as True Copies of the Original)</li><li>2) Completion Certificates for Previous Works</li><li>3) Schedules I-V<ul style="list-style-type: none"><li>I. Normal Working Hours</li><li>II. List of Basic Labour Rates</li><li>III. List of Basic Material Rates</li><li>IV. List of Basic Plant Hire Rates</li><li>V. Analysis of Major Unit Rates</li></ul></li></ul>									
ITB 13.1	The Contract is an <b>Ad-measurement Contract</b> .									
ITB 13.5										

Instructions to Bidders (ITB) reference	Data relevant to ITB
	Bid Prices <b><u>shall not</u></b> be subject to adjustment during performance of the contract.
ITB 15.1 and 22.4	Bids shall remain valid for <b>one hundred and twenty (120)</b> days.
ITB 16.1	The bid security shall be a <b><u>Bid Securing Declaration Form</u></b> in the format provided in Section IV.
ITB 17.1	Alternative proposals to the requirements of the bidding documents <b><u>shall not</u></b> be permitted
ITB 18.1	In addition to the <b><u>Original</u></b> of the bid, the number of copies is: <b>One (1) Hard Copies of the original</b>
<b>D. Submission of Bids</b>	
ITB 19.2(a)	For <b><u>Bid Submission Purposes</u></b> only, the Procuring Entity's address is: <b>The Chief Executive Officer</b> <b>The Roads Authority</b> Attention: IPDC Chairperson <b>Functional Building, Paul Kagame Road</b> <b>Private bag B346, Lilongwe 3, Malawi</b>
ITB 19.2(b)	The Procurement Reference Number is: <b><u>RA/MAI/2025-26/NR/MZ/03</u></b>
ITB 20.1	The deadline for bid submission is: Date: <b>28<sup>th</sup> May 2025</b> Time: <b>10:00 Hours</b>
ITB 23.1	The bid opening shall take place at Roads Authority Head Office Conference Room Date: <b>28<sup>th</sup> May 2025</b> Time: <b>10:00 Hours</b>
<b>F. Award of Contract</b>	
ITB 30.1	<b><u>All indigenous Black Malawians shall enjoy a margin of preference of up to 20%.</u></b>  The requirements for 20% domestic preference are indicated in Section 3; Evaluation Criteria.
ITB 35.1	The Adjudicator appointed by the Procuring Entity:  <b><u>Malawi Engineering Institution (MEI)</u></b>  The hourly fee for this proposed Adjudicator shall be:  <b><u>To be advised by the Malawi Engineering Institution (MEI)</u></b>  The biographical data of the proposed Adjudicator is:

**Part 1: Section 2 Bid Data Sheet**

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Instructions to Bidders (ITB) reference	Data relevant to ITB
	<u>To be provided by the Malawi Engineering Institution (MEI)</u>

## **Section 3. Evaluation and Qualification Criteria**

## Section 3. Evaluation and Qualification Criteria

This section, read in conjunction with Section 1, Instructions to Bidders and Section 2, Bid Data Sheet, contains all the factors, methods and criteria that the Procuring Entity shall use to evaluate a bid and determine whether a bidder has the required qualifications. No other factors, methods or criteria shall be used.

### 1. Qualification Criteria

The information required from bidders in ITB Sub-Clause 4.3 is modified as follows: **Not Applicable**

The requirements for joint ventures in ITB Sub-Clause 4.4 are modified as follows: **Not Applicable**

**To qualify for award of the Contract, in accordance with ITB Sub-Clause 4.5, bidders shall meet the following minimum qualifying criteria:**

- (a) **average annual volume of construction works over the immediate past 3 years of at least MK 1 Billion. The past three years are 2023/24, 2022/23, and 2021/22. Attach completion certificates for the works performed.**

*(All the contracts contributing to the average annual volume for each year must be listed and attached with backups. A completion certificate is required to back up each completed listed project or notice of acceptance letters and latest interim payment certificate from clients for works in progress above 70% completion)*

- (b) **experience as prime contractor in the construction of at least Two works of a nature and complexity equivalent to the Works over the last five (5) Years of at least MWK300 Million (to comply with this requirement, works cited should be at least seventy (70) percent complete. Attach completion certificates for the works performed.**

*A completion certificate is required to back up each completed listed project or notice of acceptance letters and latest interim payment certificate from clients for works in progress above 70% completion.*

- (c) **proposals for the timely acquisition (own, lease, hire, etc.) of the following essential equipment:**

	Description	Minimum Number required
1	Self-propelled graders;	2
2	10m <sup>3</sup> Tippers;	2
3	Water Bowsers (10,000 to 18,000 litre);	2
4	Pick up.	2

The Bidder must provide documentary evidence (Registration Documents) to prove ownership of the equipment and legally enforceable Lease Agreement for the equipment allowed for leasing or renting. Due diligence may be done by the Authority.



- (d) **The Bidders must demonstrate that they will have the personnel for the key positions that meet the following requirements:**

No. Required	Position	Qualification	Total General Experience (no. of years)	Specific Similar Experience relevant to the Position (Number of Projects see below) <sup>1</sup>
1	Site Agent	BSc in Civil Engineering or Diploma in Civil Engineering or equivalent or a Road Foremanship Certificate <i>(for NCIC, the minimum acceptable certificate is NCIC Level II)</i>	2 years with BSc in Engineering or Dip in Engineering or 10 years with Road Foremanship Certificate.	2
3	General Road Foreman	Road Foremanship Certificate <i>(for NCIC, the minimum acceptable certificate is NCIC Level II)</i>	5 years with Road Foremanship Certificate	3

Curriculum Vitae (CV) of staff must be updated (to be signed by the proposed personnel within the last six (6) months before the date of bid submission). Copies of the certificates shall be certified as a true copy of the original. Bidders with unsigned CVs and un-certified copies of certificates shall be disqualified.

- (e) **Liquid assets and/or Credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the contract, of no less than MWK800 Million.**

*(Letters from the bank should be addressed to the Roads Authority and state the actual amount of credit facility available and have to be dated **within six (6) months before the date of bid submission**. The address on the letter of credit shall be to The Chief Executive Officer, Roads Authority, Private Bag B 346, Lilongwe 3, Malawi).*

- (f) Evidence of registration **in the relevant NCIC Civil Engineering Category.**
- (g) In order for a bidder to be awarded more than one contract they must demonstrate that they have resource mobilisation capacity to enable them carry out multiple contracts at

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<sup>1</sup> Similar construction in this case will be the construction of at least two comparable road projects. These projects should be identified by name, contract number, client and location in the CV of the individual or given in the table of proposed staff alongside the candidate's name

the same time. The resource mobilisation capacity shall be determined from liquid assets or lines of credit requested for in paragraph (e) above for each contract and the total value of multiple contracts to be within the contractor's NCIC registration category. No bidder shall be awarded multiple contracts of a total value more than their NCIC registration category.

- (h) Any contractor who was awarded a contract in the immediate previous financial year and attained less than 75% in the Performance Score after completion of the civil works shall not be considered for the award of contract.
- (i) **The Analysis of Major Unit Rates shall be used to determine the substantial responsiveness of the bid as follows:**
  - 1. Bidders should demonstrate that the major items in the bills of quantities have been analysed.
  - 2. Bidders must demonstrate that major unit rates in the bills of quantities are not lower than the rates in the **analysis of major unit rates** submitted by the bidder.
  - 3. Quotations for materials, plant and fuel should be obtained and dated after the date of invitation for bids. Outdated quotations will be disqualified. Basic prices for labour should not be below the Government minimum wage.
  - 4. Bidders must demonstrate that prices in the analysis of major unit rates are not lower than the prices on the **list of basic labour rates, list of basic material rates, and list of basic plant hire rates** submitted by the bidder.

A consistent history of any current litigation or arbitration awards against the Applicant or any partner of a Joint Venture may result in disqualification.

The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria in (a) and (e) above; however, for a joint venture to qualify, each of its partners must meet at least twenty-five (25) percent of minimum criteria (a), (b), and (e) above for an individual Bidder, and the partner in charge at least forty (40) percent of those minimum criteria. Failure to comply with this requirement will result in rejection of the joint venture's Bid.

Subcontractors' experience and resources will not be taken into account in determining the Bidder's compliance with the qualifying criteria.

## **2. Application of Domestic Preference**

As indicated in the Bid Data Sheet, ITB30.1, all firms wholly owned by Indigenous Black Malawians shall have a margin of preference of 20%. In order to enjoy this margin of preference the bidder shall be required to prove their business ownership by submitting with their bid a colour copy of their Malawi National Identity Card issued by the National Registration Bureau.

**The margin of domestic preference shall be applied as follows:**

After bids have been received and reviewed by the Procuring Entity, responsive bids shall be classified into the following groups -

Group A, namely, bids offered by domestic contractors and joint ventures eligible for the preference.

Group B, namely, bids offered by other contractors.

For the purpose of evaluation and comparison of bids only, an amount equal to twenty (20%) percent of the bid amount shall be added to bids received from contractors in Group B.

## **Section 4. Bidding Forms**

## Section 4. Bidding Forms

### List of Forms

- 4.1 Bid Submission Form (Letter of Bid)
- 4.2 Priced Schedules (Bill of Quantities)
- 4.3 Bid Securing Declaration Form
- 4.4 Qualification Information Forms
- 4.5 Supplementary Bid Information
- 4.6 Certificate of Site Visit
- 4.7 Certificate of Pre-Bid Meeting Attendance

Note: All forms show the information to be completed by the Bidder in bold in square brackets e.g. **[insert date]** etc. ***The information provided should be in the format of the respective templates.***

## **4.1 Bid Submission Form (Letter of Bid)**

*Note to Bidders: This Bid Submission Form should be on the letterhead of the Bidder and should be signed by a person with the proper authority to sign documents that are binding on the Bidder. If the Bidder objects to the Adjudicator proposed by the Procuring Entity, he should so state in his Bid, and present an alternative candidate, together with the candidate's daily fees and biographical data, in accordance with Clause 35 of the Instructions to Bidders.*

## 4.1 Bid Submission Form (Letter of Bid)

Date: **[insert date]**

Procurement Reference No.: **[insert procurement reference number]**

Page **[insert page number]** of **[insert total number of pages]** pages

To: **[insert complete name of Procuring Entity]**

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: **[insert the number and issuing date of each Addenda]**;
- (b) We offer to execute the **[insert the name and procurement reference number of the Contract]** in conformity with the Bidding Documents for the Contract Price of **[insert amount in numbers and words]** Malawi Kwacha;
- (c) The advance payment required is: **[insert amount in numbers and words]** Malawi Kwacha;
- (d) Our bid shall be valid for a period of **[specify the number of days that the bid is valid for]** from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 20.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (e) We have no conflict of interest in accordance with ITB Sub-Clause 3.5;
- (f) Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract—has not been debarred from participation in public procurement by the Government of the Republic of Malawi, in accordance with ITB Sub-Clause 3.7;
- (g) Our firm, its affiliates or subsidiaries, including subcontractors or suppliers for any part of the contract are not under investigation by the Anti-Corruption Bureau or any other law enforcement body in Malawi relating to participation in any public procurement tender exercise or execution of any public procurement contract relating to the purchase of goods, works and services by any Procuring Entity.
- (h) The names and physical addresses of the Directors of our firm are provided in the table below:

Name	Address

- (i) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (j) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (k) We accept the appointment of **[insert name of adjudicator proposed in the BDS]** as the Adjudicator. **[or]** We do not accept the appointment of **[insert name of adjudicator proposed in the BDS]** as the Adjudicator, and propose instead that **[insert name]** be appointed as Adjudicator, whose daily fees and biographical data are attached.

Signed: **[insert signature of person whose name and capacity are shown]** In the capacity of **[insert legal capacity of person signing the Bid]**

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

Duly authorised to sign the bid for and on behalf of: **[insert complete name of Bidder]**

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ **[insert date of signing]**



*Note to Bidders: Bidders shall submit a fully priced Bill of Quantities for Ad-measurement Contracts or Activity Schedule for Lump Sum Contracts.*

*Each page of the Bill of Quantities or the Activity Schedule should be initialled by a person with the proper authority to sign documents for the Bidder.*

## **4.2 Bill of Quantities**

### **PREAMBLE TO BILL OF QUANTITIES**

#### **1. GENERAL**

- 1.1 This Preamble and the Bill of Quantities form an integral part of the Contract Documents.  
The Bill of Quantities shall be read in conjunction with the Instruction to Bidders, Conditions of Contract, Technical Specifications and Drawings.
- 1.2 The quantities given in the Bill of Quantities are estimated and provisional. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Project Manager and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Project Manager, after consultations with Employer may fix within the terms of the Contract.
- 1.3 The rates and prices tendered in the priced Bill of Quantities shall, except in-so-far as it is otherwise provided under the Contract, include the cost of all constructional plant, labour, supervision, materials tests for quality control, erection, maintenance, insurance, profit, taxes, levies and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
- 1.4 The whole cost of complying with the provisions of the Contract shall be included in the relevant pay-items in the priced Bill of Quantities. Relevant pay items are those pay-items which are provided together with applicable quantities.
- 1.5 General directions and descriptions of work and materials are not necessarily repeated nor summarised in the Bill of Quantities. The bidder is advised to refer to the relevant sections of the contract documentation before entering prices against each item in the priced Bill of Quantities.
- 1.6 Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Project Manager
- 1.7 The method of measurement of completed work for payment shall be in accordance with the measurement and payment item in the Standard and Particular Specifications.
- 1.8 Errors will be corrected by the Employer for any arithmetic errors in computation or summation as follows:

- (a) where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and
  - (b) where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern.
- 1.9 The quantities of material or work stated in the Bill of Quantities shall not be regarded as constituting authorisation to the Contractor to order materials or execute work. The Contractor shall obtain the Project Manager's detailed instructions for all work before ordering any materials or executing work or making arrangements therefore.
- 1.10 The short descriptions given of pay items in the Bill of Quantities are only for the purposes of identifying the items and providing specific details. Reference shall be made inter alia to the Drawings, Technical Specifications, and Conditions of Contract for more detailed information regarding the extent of the work entailed under each item.
- 1.11 All rates and sums of money quoted in the Bill of Quantities shall be in Malawi Kwacha.
- 1.12 For the purpose of this Bill of Quantities, the following works shall have the meanings hereby assigned to them:
 

Unit	The unit of measurement for each item of work as defined in the Project Specifications.
Quantity	The number of units of work for each item.
Rate	The payment per unit of measurement at which the Tenderer tenders to do the work.
Amount	The product of the quantity and the rate tendered for an item.
Lump sum	An amount tendered for an item, the extent of which is described in the Bills of Quantities, the Specifications or elsewhere but the quantity of work of which is not measured in any units.
Prime Sum	A sum included in the Contract and so designated in the Bills of Quantities for covering the prime cost of goods or materials to be supplied under the Contract and for delivery of such items to storage on site. The amount to be paid to the Contractor shall be the actual price paid by him
- 1.13 The Tenderer shall fill in a rate or a lump sum for each item where a quantity has been provided in the "Quantity-Column". Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as it is assumed that the contractor does not wish to receive payment for any such work.  
  
 The Tenderer shall fill in a rate against all items where the words "rate only" appear in the amount column. The provisions of Sub-clause 1209(f) of the Standard Specifications shall apply to rate-only items.
- 1.14 **The Tenderer shall not group a number of items together and tender one rate or lump sum for such group of items. The Tenderer also shall not indicate against any item that full compensation for such item has been included in another item. The Tenderer may not tender a zero rate for any item, failure to comply with this requirement may result in the tender being rejected.**

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the Contract.

- 1.15 The works as executed will be measured for payment in accordance with the methods described in the Contract Documents under the various payment items, notwithstanding any custom to the contrary.

Attention is directed to the provisions of clause 1220 of the Standard Specifications regarding the measurement of quantities for payment. Except where otherwise specified as in Clause 1220, the net measurements or mass of the finished work in place shall be taken for payment but excluding any volume or mass of work in excess of that ordered

- 1.16 The short descriptions of the payment items given in the Bill of Quantities are only for the purposes of identifying the items and providing specific details. Reference shall be made, inter alia, to the drawings, Standard Specifications, Particular Specifications, General Conditions of Contract and Special Conditions of Contract for more detailed information regarding the extent of the work entailed under each item

- 1.17 The pay item numbers that appear in the Bill of Quantities refer to the corresponding item numbers in the Standard Specifications. Certain pay item numbers appearing in the Bills of Quantities are prefixed by the letter PS. This letter signifies that either

- ◆ a new pay item not listed in the Standard Specification has been described and listed in the Particular Specification, or
- ◆ an existing measurement and / or payment clause occurring in the Standard Specifications has been clarified and / or modified in the Particular Specifications.

**The listing of pay items with or without a PS prefix where relevant has, as stated, been done to assist Bidders and in no way absolves Bidders from the obligation to familiarise themselves with, and bid on the basis of the Documents as a whole. No claim based on errors in or omissions of pay item numbers and / or the prefix PS in the columns headed "Pay Item" in the Bill of Quantities will be considered.**

- 1.20 Where a Pay Item has the unit of measurement equal to % the Tender must enter the percentage required by him under the "Rate" column, e.g. for 5% enter 5,0 not 0,05.

## **2. SCHEDULE OF DAY WORK RATES**

- 2.1 The Schedule of Day work Rates shall be used to calculate the payment due for work ordered as Day works, and for which no rates appear in the Bill of Quantities.

- 2.2 The description of the work, quality of materials and standard of workmanship shall be as described in the Specification.

- 2.3 The prices quoted in the Schedule shall cover all the necessary insurances, use and maintenance of ordinary plant (e.g. barrows, running planks, hand pumps, hand tools and appliances generally), superintendence, overhead charges and profit, and in the case of mechanically operated plant, the wages of the operator and assistant, consumables, stores, fuel, maintenance and transportation of plant to site.

- 2.4 The time of gangers, overseers, or charge hands working with their gangs, is to be paid for under appropriate items, but the time of Foremen is not to be included. This is to be

covered by superintendence. The time actually spent by labour on work shall be recorded for this purpose.

- 2.5 The price quoted for labour shall be for straight time only and no overtime rates shall be payable. Rates shall only be paid for artisans working at their trade.
- 2.6 The rates for materials shall cover distribution within the site. Delivery to the site shall be charged in addition.
- 2.7 The cost of additional watching and lighting and other incidentals specially necessitated by Day works shall not be paid for separately.
- 2.8 The rates given in the Schedules shall be taken to be operative at the time of Bidding.
- 2.9 Day works shall be carried out on the written instructions from the Project Manager
- 2.10 The description of the plant should be completed by the Bidder when bidding.

## **4.2 Bill of Quantities**

### **4.3 Bid Securing Declaration**

### 4.3 Bid Securing Declaration

[ *The Bidder shall fill in this form in accordance with the instructions indicated.*]

Date: *[insert date (as day, month and year) of bid submission]*

NCB No.: *[insert number of bidding process]*

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

To: *[insert complete name of Procuring Entity]*

We, the undersigned, declare that:

1. We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.
2. We accept that we will automatically be suspended from being eligible for bidding in any contract with the Procuring Entity and/or any other government entity for a period of **24 months** starting on the date as may be determined by the Procuring Entity if we are in breach of our obligation(s) under the bid conditions, because we:
  - (a) have withdrawn our bid during the period of bids validity specified by us in the Bid Data Sheet; or
  - (b) having been notified of the acceptance of our bid by the Procuring Entity during the period of bid validity, (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB
3. We understand that this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification of the name of the successful bidder; or (ii) thirty days after the expiration of the bid.

Signed: *[insert signature of person whose name and capacity are shown]* In the capacity of  
*[insert legal capacity of person signing the Bid Securing Declaration]*

Name: *[insert complete name of person signing the Bid Securing Declaration]*

Duly authorized to sign the bid for and on behalf of *[insert complete name of Bidder]*

Date: on ..... day of .....,..... *[insert date of signing]*

Witnessed By *[insert name of witness]* in capacity of *[insert designation of witness]*

Date: on ..... day of .....,..... *[insert date of signing]*

**[Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.]**

## **4.4 Qualification Information Forms**



*Note to Bidders: The information to be filled in by bidders in the following pages will only be used for purposes of post-qualification or for verification of pre-qualification as provided for in Clause 4 of the Instructions to Bidder, and will not form part of the Contract. Attach additional pages as necessary. If used for pre-qualification verification, the Bidder should fill in updated information only.*

## 4.4 Qualification Information Forms

### 1. Individual Bidders or Individual Members of Joint Ventures

#### 1.1 Constitution or legal status of Bidder: **[attach copy]**

Place of registration: **[insert]**

Principal place of business: **[insert]**

Power of attorney of signatory of Bid: **[attach]**

#### 1.2 Average annual volume of construction work performed in the previous number of years specified in Section 3, Evaluation and Qualification Criteria: **[insert details below and state average]**

Year:			
Volume:			
Average			

**1.3 Work performed as prime Contractor on works of a similar nature and volume over the last five (5) years.** Also list details of work under way or committed, including expected completion date. **[Insert details below]**

Project name and country	Name of client and contact person	Type of work performed and year of completion	Value of contract
(a)			
(b)			

CURRENT COMMITMENT					
	Project name and country	Name of client and contact person	Value of contract MWK	Start Date	Completion Date
(a)					
(b)					

**1.4 Major items of Equipment proposed for carrying out the Works.** [List all information requested below].

Item of equipment	Description, make, and age (years)	Condition (new, good, poor) and number available	Owned, leased (from whom?), or to be purchased (from whom?)
(a)			
(b)			

**1.5(a) Qualifications and experience of key personnel for administration and execution of the Contract. Attach biographical data**

Position	Name	Qualifications	Years of experience (general)	Years of experience in proposed position
(a)				
(b)				

## 1.5(b) Curriculum Vitae for Proposed Key Personnel

1. **Proposed Position:** *[only one candidate for each position]* \_\_\_\_\_
2. **Name of Firm:** \_\_\_\_\_
3. **Name of Staff:** \_\_\_\_\_
4. **Date of Birth:** \_\_\_\_\_ **Nationality:** \_\_\_\_\_
5. **Education:** *[indicate college/university and other specialised education, giving names of institutions, degrees obtained and dates of obtained]* \_\_\_\_\_
6. **Membership of Professional Associations:** \_\_\_\_\_
7. **Other Training:** *[indicate other significant training not included under Education]* \_\_\_\_\_
8. **Countries of Work Experience:** *[list countries of work experience in the last ten years]* \_\_\_\_\_
9. **Languages:** *[indicate proficiency in each language as good, fair or poor for speaking, reading and writing]* \_\_\_\_\_
10. **Employment Record:** *[starting with present position, list every employment held since graduation, stating dates of employment, employing organisation and positions held]* \_\_\_\_\_  
**From:** *[year]* \_\_\_\_\_ **To:** *[year]* \_\_\_\_\_  
**Employer:** \_\_\_\_\_  
**Positions held:** \_\_\_\_\_

<b>11. Detailed Tasks Assigned:</b>  <i>[list all tasks to be performed under this assignment]</i>	<b>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned:</b>  <i>[indicate the following information for those assignments that best illustrate the member of staff's capability to handle the tasks listed under point 11]</i>  Name of assignment or project: _____ Year: _____ Location: _____ Client: _____ Main project features: _____ Positions held: _____ Activities performed: _____
--	---

### 13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

\_\_\_\_\_  
*Signature of staff member*

Date: \_\_\_\_\_  
*Day/Month/Year*

**1.6 Proposed subcontractors involved for this project.**

**[Insert details below]**

Sections of the Works	Value of subcontract	Subcontractor (name and address)	Experience in similar work
(a)			
(b)			

1.7 Financial reports for the last five (5) years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

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

1.9 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Procuring Entity.

Name of Bank and Branch	Address	Telephone, Fax and E-mail Address

## 1.10 Information on any current litigation in which the Bidder is involved.

Other party(ies)	Cause of dispute	Amount involved
(a)		
(b)		

Bidder's Legal Name: \_\_\_\_\_ Date: \_\_\_\_\_

JV Partner Legal Name: \_\_\_\_\_

Bidding No.: \_\_\_\_\_

Non-Performing Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance <b>did not</b> occur during the stipulated period, in accordance with Sub-clause 1(i) of Section III, Evaluation and Qualification Criteria. <input type="checkbox"/> Contract non-performance occurred during the stipulated period, in accordance with Sub-clause 1 (i) of Section III, Evaluation and Qualification Criteria as indicated below.			
Year	Outcome as Percent of Total Assets	Contract Identification	Total Contract Amount (current value)
_____	_____	Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	_____
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> <input type="checkbox"/> No pending litigation in accordance with Sub-clause 1 (i) of Section III, Evaluation and Qualification Criteria. <input type="checkbox"/> Pending litigation in accordance with Sub-clause 1 (i) of Section III, Evaluation and Qualification Criteria, as indicated below			
Year	Outcome as Percent of Total Assets	Contract Identification	Total Contract Amount (current value)
_____	_____	Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	_____
_____	_____	Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	_____

- 1.11 Proposed Program (work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents.

**2. Joint Ventures**

- 2.1 The information listed in 1.1 - 1.11 above shall be provided for each partner of the joint venture; except for the information in 1.5, 1.6 and 1.11 above which shall be provided for the joint venture as a whole.
- 2.2 Attach the power of attorney of the signatory (ies) of the Bid authorising signature of the Bid on behalf of the joint venture.
- 2.3 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that
- (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
  - (b) one of the partners will be nominated as being in charge, authorised to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
  - (c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

**3. Additional Requirements**

- 3.1 Bidders should provide any additional information required in Sections 2 or 3 of the Bidding Document or to fulfil the requirements of Sub-Clause 4.1 and Clause 30 of the Instructions to Bidders, if applicable.



## **4.5 Additional Bid Information**

## **SCHEDULE I**

### **NORMAL WORKING HOURS**

[The Tenderer shall insert below the normal working hours on which he has based his tender]

Monday to Friday	
Saturday:	
Sunday:	
Normal Working Hours per week:	

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Position: \_\_\_\_\_

(Tenderer or his Representative)

## SCHEDULE II

### LIST OF BASIC LABOUR RATES

[The Tenderer shall insert below the basic rates of wages on which he has based his tender. Such rates shall be substantiated should the Contract Administrator so require]

Category of Employee	Unit	Basic Rate MWK
Unskilled Labour	Day	
Semi-skilled Labour	Day	
Tradesman	Hr	
Plant Operator	Hr	
Driver	Hr	

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Position: \_\_\_\_\_

(Tenderer or his Representative)

## SCHEDULE III

### LIST OF BASIC MATERIAL PRICES

[The Tenderer shall insert below the basic prices of materials delivered to site, on which he has based his tender. Such rates **must** be substantiated with copies of quotations from suppliers]

Material	Unit	Price Ex Factory MWK	Price of Transport To site MWK	Price Delivered to Site MWK
Ordinary Portland Cement	Tonne			
T12 High Yield Stress Steel	Tonne			
T16 High Yield Stress Steel	Tonne			
T20 High Yield Stress Steel	Tonne			
Welded Steel Fabric (A142)	Tonne			
Welded Steel Fabric (A98)	Tonne			
Block Board (2.4m x 1.2m x 0.025m)	No.			
Diesel Fuel	l			
Petrol Fuel	l			
Gabion Baskets 2 x 1 x 1 m	Box			
Reno Mattress 2 x 1 x 0.3	Box			
9.5mm Aggregates	m <sup>3</sup>			
13.2mm Aggregates	m <sup>3</sup>			
19mm Aggregates	m <sup>3</sup>			
Quarry Dust	m <sup>3</sup>			
MC 30 Cut Back Bitumen	litre			
Penetration Grade 70/100 Bitumen	litre			
Stable 60 – 60% Spray Grade Emulsion	litre			
Softwood Timber	m <sup>3</sup>			
Hardwood Timber	m <sup>3</sup>			
Treated Timber Beams	m <sup>3</sup>			

No additions shall be made to the above list

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Position: \_\_\_\_\_

(Tenderer or his Representative)

## SCHEDULE IV

### LIST OF BASIC PLANT HIRE RATES

[The Tenderer shall insert below the basic plant hire rates, on which he has based his tender. Such rates shall be substantiated should the Contract Administrator so require]

Plant	Daily Rate MWK	Hourly Rate MWK
D6 Dozer		
Motor Grader		
Front End Loader		
Excavator		
Wheel Loader		
Vibrating Roller		
Backhoe Excavator		
Water Bowser		
Tipper 7t		
Lorry 7t		
Flat lorry		
Water Pump with Hoses		
Concrete Mixer		
Concrete Poker and Vibrator		
Line Marking Machine		

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Position: \_\_\_\_\_

(Tenderer or his Representative)

## SCHEDULE V

### ANALYSIS OF MAJOR UNIT RATES

[Insert details below]

Item No. (See Bills)	Labour MWK	Materials MWK	Plant Incl. Transport MWK	Fuel & Lubricants MWK	Overheads & Profit MWK	Total Rate MWK

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Position: \_\_\_\_\_

(Tenderer or his Representative)

## **4.6 Certificate of Site Visit**

## Certificate of Site Visit



### Roads Authority

This is to certify that I, .....  
(Name of Representative of Bidder)

in the capacity of: .....  
(Position within the firm of the Representative of Bidder)

for .....  
(Name of Firm)

visited the site in connection with the tender for:

Procurement Reference No.: .....

Project Name:  
.....

and confirm that:

- 1 Having studied the documents, I have carefully examined the site.
- 2 I have made myself familiar with all the local conditions influencing the works and the cost thereof.
- 3 I further certify that I am satisfied with the description of the works and the explanations given by the Representative of the Contracting Authority and that I understand perfectly the works to be done as specified and to be executed under the contract.

Signature

Representative of Bidder \_\_\_\_\_ (Signature)



## Section 5. Eligible Countries

All countries are eligible except countries subject to the following provisions.

A country shall not be eligible if:

- (a) as a matter of law or official regulation, the Government of the Republic of Malawi prohibits commercial relations with that country, provided that the Government is satisfied that such exclusion does not preclude effective competition for the provision of the works required; or
- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Government of the Republic of Malawi prohibits any procurement of works from that country or any payments to persons or entities in that country.

## **6(A) Scope of Works**

Description of the Project Location	The project location is on Selected Roads in Mzimba District
Description of the Maintenance Works	The works shall involve grading and associated drainage works
Relocation of Services	Not applicable
Compensation	Not applicable
Completion period	90 days

## **Section 6**

# **Work Requirements**

## Volume II

## **Contents**

6 (A) Scope of Works (See Volume I)

6 (B) Drawings (See Volume I)

6 (C) Technical Specifications

6 (D) Supplementary Information

## **SECTION 6C: TECHNICAL SPECIFICATIONS**

## **6 C. TECHNICAL SPECIFICATIONS**

The Technical Specifications to be used for this Contract contain two Parts as follows:

### **PART A: STANDARD SPECIFICATIONS**

The Standard Specifications for this contract shall be the Southern African Transport Co-ordination Committee (SATCC) Draft Standard Specifications for Road and Bridge Works, September 1998, reprinted July 2001.

This Document, which forms Part of the Tender and Contract documentation, is printed by the SATCC in Maputo in Mozambique and all Tenderers should acquire their own copy of this standard document at their own cost. Tenderers should note that whilst this document is similar to the “Standard Specifications for Road and Bridge Works for State Road Authorities”, (otherwise known as the COLTO specification, prepared by the South African Committee of Land Transport Officials), there are significant differences in some items.

### **PART B: PARTICULAR SPECIFICATIONS**

**THE PARTICULAR SPECIFICATIONS FORM AN INTEGRAL PART OF THE TENDER AND CONTRACT DOCUMENTATION AND SUPPLEMENT THE STANDARD SPECIFICATIONS.**

In the event of any discrepancy with a part or parts of the Standard Specifications, the Bill of Quantities or the Drawings, the Particular Specifications shall take precedence.

The Particular Specifications are contained in the pages that follow.

All references to Project Specifications in the Standard Specifications, shall mean Particular Specifications for this contract.

The terms “Project Specifications” and “Particular Specifications” shall be interpreted to have the exact same meaning. All works shall be measured as described in the Bill of Quantities.

The Particular Specifications, shall supplement and modify, delete and/or add to the Standard Specifications, as stated. Where any Clause, paragraph or sub-paragraph in the Standard Specifications is supplemented by one of the following paragraphs from the Particular Specifications, the provisions of such Clause, paragraph or sub-paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto, deleted, or superseded by any of the following paragraphs in the Particular Specification, the provisions of such Clause, paragraph, or sub-paragraph in the Standard Specification, not so amended, deleted or superseded shall remain in effect.

**Clauses and pay items modified by the Particular Specifications are numbered “PS” followed by a number corresponding to the number of the relevant clause or pay item in the Standard Specifications. New clauses and pay items not covered in the Standard Specifications are also designated “PS” followed by a number. These numbers follow on from the last clause or payment item number used in the relevant section of the Standard Specifications.**



## **PART B: PARTICULAR SPECIFICATIONS**

### **SERIES 1000:GENERAL**

#### **Section 1100:Definitions and Terms**

✓ ***Change Clause 1126 as follows:***

##### **PS 1126 Road Prism**

The areas indicated in Figures 1 and 2 in the SATCC Draft Standard Specifications for Road and Bridge Works issued by the SATCC in September 1998 (reprinted July 2001).

✓ ***Add the following definitions:***

##### **PS 1142 Routine Term Maintenance Contract**

This is a contract that operates on the basis of a Contractor being appointed for a fixed period of time (typically 1 year with possible extension) to undertake a variety of maintenance tasks, as-and-when the need arises and the requirement to do any work is instructed by means of a Works Order issued by the Employer or his Representative.

##### **PS 1143 – Additional Routine Term Maintenance (RTM) Definitions**

The following table provides additional definitions for the routine term maintenance works.

<b>Term</b>	<b>Meaning</b>
AASHTO	American Association of State Highway and Transportation Officials.
ASTM	American Society for Testing Materials.
Binder	Viscous adhesive (normally bitumen based) used to bind aggregates together and provide waterproofing.
Bitumen	Petroleum based binder formed as residue following the distillation of crude oil. Comes in various grades depending on viscosity and volatility.
Blading	The activity of cutting the road surface using a motor grader.
Bleeding	Excess free binder on the surface of the pavement.
Block Cracking	Interconnected cracks in a bituminous road surface forming a series of large polygons usually with sharp corners or angles.

<b>Term</b>	<b>Meaning</b>
BS	British Standard.
California Bearing Ratio (CBR)	A standard test (ASTM D1883) which assigns a relative support / strength value based on resistance force to a penetrating plunger. Percentages quoted are relative to a standard compacted crushed stone. Samples are pre-soaked for at least 4 days, unless otherwise stated.
Camber	The uniformly shaped slope of a road lane necessary to shed water off the road.
Camber board	'Homemade' apparatus for checking cross-fall of road or shoulder camber. Has a level upper surface used with a spirit level.
Cold-mix	A bitumen / aggregate asphalt, made with cutback bitumen to allow workability at ambient ('cold') temperatures. Used mainly for patch / pothole repair.
Compaction Fraction	A standard test for pipe bedding which compares un-compacted and compacted volumes of material using a specified procedure.
Cross-Fall	The gradient of pavement camber measured transversely across the road. Usually falls to either side of the centre line but may slope continuously across the road on bends ('super-elevation').
Crown	The highest point of the cross-section of the road, usually the centre line.
Cure	A term applied to the hardening of a bitumen cutback or emulsion resulting from the evaporation of volatile 'cutter' or water.
Cut-back (bitumen)	A blend of bitumen and volatile 'cutter' (normally a mixture of kerosene & diesel). Material is graded in terms of viscosity and curing rate (SC, MC & RC: 'slow', 'medium' and 'rapid' curing). Viscosity increases with size of number (e.g. MC 3000).
Emulsion (bitumen)	A mixture of water and bitumen (held in fine suspension). Used mainly for surface dressing (treatment), patching material and as a tack coat. Can be used cold.
Kettle	Small mobile heater unit for raising the temperature of bitumen binders. Often fitted with hand lance and discharge pump / hose.
Length - Person	A person assigned to perform a prioritised list of labour based routine maintenance operations to defined sections of a road.

<b>Term</b>	<b>Meaning</b>
Nominal aggregate size	Normally the 2 <sup>nd</sup> largest sieve size in a quoted grading. Usually 100% must pass the largest, with a retained percentage required on the 2 <sup>nd</sup> largest.
Overlay	A uniform thickness layer of asphalt applied over an existing road, largely for strengthening the pavement.
Patching	The localised application of bituminous surfacing to an existing bituminous surface, to fill depressions or seal a defect.
Periodic Maintenance	Maintenance works that are occasionally required at intervals of several years. Normally relatively costly, large scale works requiring specialist equipment and skilled resources.
Plasticity Index	Abbreviated 'PI'. The difference between Liquid and Plastic Limits of the 'fines' content of an aggregate material – serves as an indicator of the 'clay' content of the fines.
Prime coat	A penetrating, liquid application of heated bitumen (often a cutback) applied to an unbound aggregate pavement layer (usually base course) to provide a bond between unbound aggregate and bituminous seal.
Rehabilitation	A major intervention to an existing road aimed at significantly extending its design life.
SABS	South African Bureau of Standards.
SATCC	Southern African Transport and Communications Commission.
Spoil	Material originating from the maintenance / construction operations which is not re-utilised ('waste').
Weep hole	A hole in a wall / structure which allows the passage of water for the purpose of preventing the build-up of water pressure.
Windrow	A long, narrow mound or bund of material formed by a motor-grader.
Works Order	An instruction issued by the Employer or his Representative which directs the Contractor to carry out Works or perform some function or obligation under the Contract.

**SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS**

✓ ***Add to following to Clause 1201:***

**PS 1201 SCOPE**

The Section also covers matters which in particular relate to the Routine Term Maintenance (RTM) contract (**From PS 1230 to PS 1239**). The RTM contract operates on the basis of a Contractor being appointed for a fixed period of time (typically 1 year with possible extension) to undertake a variety of maintenance tasks, as-and-when the need arises and the requirement to do any work is instructed by means of a Works Order issued by the Employer or his Representative.

The types of work covered through this Routine Term Maintenance (RTM) approach are limited to activities that are required regularly to keep the Malawian road network in good and fair conditions and for which the scope of the work is reasonably predictable. Contractor's prices are required to be applicable regardless of where, when and in what quantity the work arises on the road network. This makes the approach quite different from a 'works style' contract where the rates take careful account of site-specific information and considerations. For these reasons RTM is particularly suitable for routine road maintenance works. Conversely, most 'periodic maintenance' activities (e.g. regravelling or resealing) are planned in advance. Here, the presentation to bidders of detailed site information ensures that competitive bids are encouraged. Making this distinction also avoids situations where relatively short sections of periodic maintenance can rapidly exhaust funds set aside for continuous routine tasks. For this reason separate budget heads for routine term maintenance (RTM) and periodic activity contracts are normal.

Dayworks are included in RTM contracts to facilitate 'emergency' works and also those of unusual requirements. Finally, an item for 'Length-persons' has been incorporated and will be particularly useful for instances where a road section already brought to a good standard requires preserving as such by continuous, minor attention.

**PS1204:                      PROGRAMME OF WORK**

✓        ***Replace the first paragraph with the following:***

**(a)        APPROVED PROGRAMME**

The contractor shall submit his programme of work, within the time stated in the Particular Conditions of Contract, to the Engineer for approval. The Contractor shall ensure that he has at his disposal adequate staff with the necessary expertise to develop and maintain the network programme for the duration of the contract and to provide the information required by the Engineer as specified hereafter.

The programme shall be in a bar chart (Gantt chart) or any other time-activity format acceptable to the Engineer and shall clearly show:

- (1)        The proposed rate of progress in order to complete the works within the required period as tendered, showing the various activities, their duration and proposed resources (major plant and labour) for each element of the works. Sufficient details shall be provided to enable the Engineer to be able to assess construction progress. All activities, including establishment on site, trimming and finishing and the completion of all minor ancillary works are to be included in the programme.
- (2)        The sequence of activities and any dependencies (time or resource related) between them; the critical path activities; the amount of slack time for non-critical activities;
- (3)        Key dates in respect of work to be carried out, or information, etc., to be provided, by others.
- (4)        The anticipated value of work to be done during each month and any
- (5)        Other information specifically required by the Engineer.

When drawing up his programme, the Contractor shall, take into consideration:

- (1)        Testing and approval process of materials and works
- (2)        Expected weather conditions and their effects.
- (3)        Known physical conditions or artificial obstructions.
- (4)        The accommodation and safeguarding of public traffic.
- (5)        Dealing with, altering and installing services.
- (6)        Expropriation and all other actions required in terms of this contract.

The following details shall be submitted together with the programme.

- (1)        the number of working hours per day, working days per week, assumed holiday or shut-down periods on which the programme is based.
- (2)        The overall labour and major plant resources on which the programme is based.

- (3) The detailed traffic accommodation proposals on which the programme is based (road or lane closures, lengths of sections to be worked, timing etc).
- (4) The rate of production for major works components such as layer works, subbase, base, surfacing, etc (units per day / hour) on which the programmed time for carrying out the work is based.

The Contractor shall base his initial programme of work on the scope of the work as described in the Particular Specifications. This programme shall be reviewed on a regular basis by the Contractor in accordance with changing circumstances, delays and amendments to the work ordered by the Engineer as a result of further examinations made by him.

Minor revisions to the approved programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer believe that a major revision of the programme is required, the Contractor will be notified in writing and a revised programme shall be submitted within two weeks of receipt of such notification.

It should be noted that it is in the Contractor's interest to provide a comprehensive programme giving as much information as possible about the times allowed for the various activities as well as resource or other limitations affecting the programme, since the approved programme may be used to evaluate any claims in terms of the General Conditions of Contract for extensions of time.

## **(b) REPORTING**

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting copies of the following:

- (i). The construction programme with progress charts and programme graphs updated to reflect the actual progress to date.
- (ii). A summary of progress on site over the month preceding the site meeting. The report shall be in the form of a detailed narrative to the construction programme.
- (iii). Details of activities running late, indicating what steps have been or will be taken to ensure that the work is completed within the specified time.
- (iv). A report on all labour, plant and materials on site, according to sub-clauses PCC 4.21 and PCC 6.10 of the Particular Conditions.

## **PS1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS**

✓ ***Add the following at the beginning of this clause:***

"Upon issuance of the order to commence, the Engineer shall issue to the Contractor a set of setting out co-ordinates and the Contractor shall set out the works accurately and shall be responsible for any error(s) which may occur in such setting out and shall amend and rectify such error(s) at his own expense.

In addition to setting out data, the Engineer shall issue to the Contractor co-ordinates of Benchmarks and control points for survey control. The Contractor shall, prior to using the

benchmarks and control points, check their accuracy and confirm in writing to the Engineer that the information is sufficient for setting out the works accurately. Should discrepancies be found in the information issued by the Engineer, the Contractor shall afford the Engineer the opportunity to investigate the discrepancies and correct them within a period of seven calendar days. The Contractor shall programme his work in such a way that this requirement will not impact negatively on the rate of progress of the works, and no claim for extension of time will be entered pursuant to this requirement.

The Contractor may if he deems it necessary, establish additional control points. Any additional control points shall consist of steel pegs set in concrete at positions not likely to be affected by the works. The coordinates of the established points shall be issued to the Engineer in the form 'Name,Y,X,Z'

✓ ***Replace the second sentence in the second paragraph with:***

"In case that the reference beacons along the contract sections have been either destroyed, displaced or damaged before the handing over of the site to the contractor, then the Engineer will arrange to have new reference benchmarks reinstated by the Contractor at 500 m intervals and the cost of the re establishment work will be paid under Section 1800 (Day Works) of the Particular Specifications".

#### **PS1207: NOTICES, SIGNS AND ADVERTISEMENTS**

✓ ***Add the following to the second paragraph:***

See Section 6D in Volume II of this document for details of the Notice Boards. These boards shall remain in position until the end of the Defects Liability Period, and shall then be removed without delay.

#### **PS 1208: MEASUREMENTS**

✓ ***Add the following clause to 1208 (c):***

Cross-sectional levels shall be taken at not greater than 20-metre intervals jointly from the Surveyor of the Engineer and of the Contractor and agreed between the Contractor and the Engineer before any clearing, grubbing, stripping of topsoil or earthworks are undertaken and at any stage thereafter that the Engineer may require.

Cross sections shall be taken at the same interval as the setting out. The cross sections shall cover the entire road reserve and shall contain a minimum of seven points consisting of centre point and three equally spaced points on either side of the centre point. The points shall be in line and perpendicular to the centre line. The results of the survey shall be certified by the Engineer as soon as possible.

#### **PS1209 PAYMENT**

##### **(b) Rates to be inclusive**

✓ ***Replace "period of maintenance" in the last line of the first paragraph with "Defects Liability Period"***

##### **(c) The meanings of certain phrases in payment clauses**

(i) Procuring and furnishing (materials)

✓ ***Insert "duties" in the sixth line of sub-clause after "all tax"***

**PS 1210 CERTIFICATE OF COMPLETION OF THE WORKS**✓ **Add the following to this clause:**

Opening of a section of road to public traffic **before** the requirements of Clause 1210 have been met, if such opening should be allowed by the Engineer, shall not entitle the Contractor to the issue of a Certificate of Completion for the road section in question.

**PS 1214: Contractor's Activities in Respect of Property Outside the Road Reserve and of Services Moved, Damaged or Altered**✓ **Add the following clause 1214 (f):**

Any of the Contractor's activities outside the Site or outside the road reserve on property not belonging to the Employer shall be exclusively at the Contractor's own risk, cost and responsibility."

**PS1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL**

- ✓ Method (ii) (Critical – path method) will be used for determining the extension of time due to inclement weather.
- ✓ Add the following table B1215/1 at the end of section on Method (ii) (Critical Path)
- ✓ Abnormal rain as shown in table B1215/1 shall be proven by rainfall records for previous five years (prior to contract start date) from Metrological Department. For the purposes of calculating an extension of time due to climatic conditions the number of days in excess of the number of working days anticipated to be lost due to climatic conditions as shown in Table B1215/1 shall be taken into account:

B 1215/1: Anticipation days ("n" working days) lost due to climatic conditions:

Month	Rain Days		
	Northern Region	Central Region	Southern Region
January	19	15	18
February	19	12	16
March	16	10	11
April	9	7	6
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	2	3	0
December	5	10	9
Total	70	57	60



The Engineer will certify a day lost due to climatic conditions only if:

- (a) no work on the critical path according to the latest approved programme for completion of the works could be carried out during that specific working day or if
- (b) only 30% or less of the work force and plant planned for that specific day, could work.

The extension of time as a result of climatic conditions will be calculated monthly as being equal to the number of days certified by the Engineer as lost due to climatic conditions, less the number of days in Table B1215/1. The total extension of time for the contract will be the sum of the monthly extensions. If the total extension of time for the Contract is negative it will be disregarded when determining the completion date(s)."

**Add the following new clauses:**

**PS 1230: Road Network Inspections**

Inspections are required to constantly watch and monitor the condition of the road network so that necessary maintenance works can be identified in a timely manner. The Contractor is required to inspect all road asset features on the Network and to report the occurrence of problems and other areas of deterioration to the Employer's Representative in an agreed format, at monthly intervals on an agreed monthly date. The Employer's Representative will also be monitoring the Network, but he may also utilise reports from the Contractor as one key trigger for detailed inspections.

Emergencies shall be reported immediately they become known. Inspection requirements are detailed in the table below:

All costs incurred by the Contractor in performing these obligations should be covered by a particular pay item in the bills of quantities.

**Table 1: Inspection Requirements**

Road Class	Asset Item	Frequency of Inspection	Defects (Including location details)
Paved 'M' Roads	Pavement	Weekly	Occurrence and size of any pothole. Extent (length and width) of any edge breaks. Extent of any surface cracking.
	Drainage Ditches	Weekly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All Other Paved Roads	Pavement	Fortnightly	Occurrence and size of any pothole. Extent (length and width) of any edge breaks. Extent of any surface cracking.
	Drainage Ditches	Fortnightly	Height and extent of vegetation growth. Other blockages.

Road Class	Asset Item	Frequency of Inspection	Defects (Including location details)
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All Unpaved 'M', 'S', 'T' Roads	Pavement	Fortnightly	Corrugations or ruts in the surface. Soft or eroded sections. Inadequate thickness of gravel. Loss of road camber.
	Drainage Ditches	Fortnightly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All District Roads	Pavement	Monthly	Any road blockage or physical feature causing obstruction. Soft or eroded sections.
	Drainage Ditches	Monthly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.

**PS 1231 - Emergency Works**

In the case of emergency situations; where an emergency contractor cannot be deployed, the contractor who is present on a particular part of the road network will be instructed to carry out the necessary emergency works.

**PS 1232 - Traffic Control**

In the case of RTM contracts; traffic control shall be carried out in line with Section 1500 of these technical specifications.

**PS 1233 Safety**

The Contractor shall pay due regard to the safety of his workers and the travelling public. Any obstructions unavoidably left within the highway shall be clearly marked and have advance warning markers and signs in accordance with the specification.

All equipment and vehicles shall be in a good, safe condition. All intended guards and safety features originally provided by the manufacturer shall be in place and operational. Vehicles operating in the highway shall be roadworthy with working lights and braking system.

The Contractor shall pay particular attention to the safety of operators and all persons in the vicinity of heated bitumen works, and fuel transfer / storage operations. Fire extinguishers must be available and a prohibition of smoking must be actively enforced. The temperature of heated materials shall be measured and controlled to prevent overheating.

The Contractor shall have first aid facilities in place to attend to personal injuries that may result from accidents occurring within the work Site.

**PS 1234 - Protection of the Environment**

The Contractor shall take all reasonable precautions to avoid or limit environmental impact. In addition to normal good construction and maintenance practice; it is expected from the Contractor to strictly follow the requirements of the Environmental Guidelines and/or project specific Environmental Management Plans produced by the Roads Authority. Any non-compliance with these requirements which could have been avoided in the opinion of the Engineer may be considered sufficient grounds for withholding payment of part or all of the amounts to be paid for the pay item PS13.05

### **PS 1235 - Length-Person Activities**

The activities comprise providing, supervising and managing teams of 'length-persons' to perform a prioritised list of labour-based routine maintenance operations to sections of road, its shoulders, verges and drainage features. The Contractor is responsible for keeping the length-persons correctly equipped at all times. The activity assigns a defined road length to each length-person who conducts a number of routine maintenance activities on that section.

Some contracts require that a high level of precedence be attached to the performance of routine maintenance tasks by Length-persons managed by the main Contractor. In this regard it should be anticipated that the assignment of Length-persons will be required wherever practicable.

In all cases where length-persons have been assigned pursuant to a Works Order; the performance of associated routine maintenance activities shall always be measured as included under pay item

Length-persons will normally be assigned on the basis of one individual worker per 2 kilometre of road. This spacing may be adjusted and fixed by the Employer, following discussions with the Contractor, where either party considers the workload to be inappropriate based on field observations.

The use of length-persons will yield best results when applied to roads that are already in a good condition and / or have recently received a programme of periodic or routine maintenance to bring them into a maintainable condition.

The primary objective of the length-person is to carry out operations to preserve a road in a good condition. Generally the daily time inputs of length-persons will be as necessary to achieve the specified maintenance outputs ('performance standards') and will be adjusted accordingly by the Contractor.

However, where the road is initially in a poor condition, the Employer shall agree with the Contractor in advance of works starting, a period for enhancing the condition of the road when the activities and assigned work length intervals may be temporarily adjusted. In these cases performance targets will be set on the basis that each length person will provide work equivalent to an average of 40 hours effective labour per week.

Performance is controlled through the application of liquidated damages as specified in the Contract. This is on the basis of fixed deductions per kilometre for cases where in the opinion of the Employer's Representative the works are not adequately performed, and / or the length-person is not properly equipped.

Length-persons are categorised separately depending on whether they are assigned to rural or designated urban areas.

**PS 1236 Quarries, Borrow Areas and Dumps**

**The Contractor is responsible for identifying all quarry and borrow areas that will yield materials** in sufficient quantity and quality to meet all the requirements of the Specification. The Employer may provide reasonable assistance in securing consents and licenses, however the Contractor shall be responsible for any compensation, royalty and any other costs associated with acquiring rights and operating the site.

The Contractor is similarly responsible for identifying and acquiring rights to use all dump sites and for their subsequent restoration.

The exploitation of all the identified borrow areas, quarries, and dumps (tips) must be approved by the Employer. Section 3100 provides general requirements on the operation and restoration of such areas.

**PS 1237 Distinction of Earth and Gravel Roads**

The relevant maintenance works for earth and gravel roads are described in different sections of the Technical Specifications. Section 3300 is applicable for maintenance works on earth roads which consist of unimproved earth soil. Section 3400 is applicable for maintenance works on gravel roads which have defined engineering properties and require more effort to cut, trim and compact as well as in sourcing, selecting, excavating and transporting the gravel.

**PS 1238 - Target Serviceability Standards**

The following schedule of intervention levels should be referred to by the Contractor when predicting the likely frequency, pattern and distribution of required maintenance works over the assigned Network. It is not applicable for works undertaken by Length-Person. It is for guidance purposes only. The Employer intends to use a similar schedule to guide the generation of Works Orders. The actual coverage of work will however be based on allocated project funds following the system of prioritisation described in PS 1239.

As an example, in the case of a single pothole appearing on a rural stretch of Main paved road, the Contractor can expect to be instructed to carry out a repair as soon as it reaches 250mm diameter in size. Upon receiving the instruction through a Works Order he would have to complete the repair within the time specified. Late completion would require the application of liquidated damages to the extent stated in the Contract.

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
<b>BITUMEN PAVED ROADS</b>				
PAVEMENT	Potholes	'M' (Rural)	No single pothole >250mm dia.	Initiate repair
		'M' (Urban)	Three (3) potholes >250mm dia. per any 250m section	Initiate repair
			No single pothole >400mm dia.	Initiate repair
		All other (Rural)	No single pothole >400mm dia.	Initiate repair

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
		All other (Urban)	Five (5) potholes >250mm dia. per any 250m section	Initiate repair. Defer severe cases to 'Periodic Programme'.
			No single pothole >750mm dia.	Initiate repair
PAVEMENT	Edge Breaks	'M' Roads	Loss of >200mm width over a length >10m.	Initiate repair. Investigate cause – also reinstate shoulder if necessary.
		All Others	Loss of >300mm width over a length >25m.	- ditto -
	Cracks >3mm width	'M' Roads	Any	Seal cracks
		All Others	Areas where >5% is affected.	Seal cracks
	Cracks <3mm width	'M' Roads	Areas where 10-20% is affected.	Apply slurry seal patch
		All Others	Areas where >20% is affected	Apply slurry seal patch
	Superficial deterioration	All	Based on visual assessment	Paint / repair
		All	Any significant build up	Clear
BRIDGES	Silted / blocked	All	Minor	Repair
		All	Major	Defer to Periodic Programme
	Structural damage	All	Based on visual assessment	Paint / repair
		All	Any significant build up	Clear
PIPE CULVERTS	Silted	All	>25% of bore capacity lost	Clear following inspection before and after wet season
	Erosion	All	Affects stability of the structure / road	Repair following inspection following wet season
DRAINS	Silted / overtopping	All	Any observed overtopping during rains, or >25% loss of depth.	Repair following inspection before and after wet season
	Erosion	All	Any rapid worsening of condition.	Repair following inspection before and after wet season
SHOULDERS	Edge Step	All 'M' roads	>50mm step on a section >10m	Reconstruct shoulder
		All Others	>75mm step on a section >25m	Reconstruct shoulder
	Erosion	All	Any deteriorating condition threatening stability	Repair

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
SHOULDERS	High Vegetation	All	Interferes with sight lines or pedestrian access	Cut and clear
ROAD FURNITURE	Damaged signs	All	Function impaired	Replace
	Omitted signs	All	Urgent potential danger	Install new sign
	Faded road markings	All	>25% of length ceases to be distinguishable	Repaint
SAFETY	Obstructions	All	Any avoidable temporary danger	Urgent attention (usually 'dayworks')
	Slips and other hazards	All	Any assessed potential to restrict access	Clear and / or carry out stabilisation works
<b>UNPAVED ROADS</b>				
Note: Due to the wide range of road conditions and traffic demand on the unpaved network, the majority of intervention levels should be determined on a case-by-case basis with the objective of maintaining reliable, year-round access.				
GRAVEL SURFACE	Corrugations and / or eroded surface	All (>250 vpd)	Traffic speed significantly impaired	Grade typically 4-5 times per year
		All (50 - 250 vpd)	Uncomfortable to travel	Grade typically 2-4 times per year
		All (<50 vpd)	Ensure safe reliable access	Grade typically 1-2 times per year
	Inadequate gravel thickness	All	<50mm thick on sections <250m long	Spot repair or localised re-gravelling
			<50mm thick on sections >250m long	Defer to 'Period Programme' (Re-gravelling)
EARTH	Shape	All	Ensure year round reliable access	Carry out 'spot improvements'
DRAINAGE FEATURES	Standing Water	All	Standing water on road surface	Spot improvement to improve profile / camber
DRAINAGE FEATURES	Standing Water	All	Any blockage to drains / culverts	Rectify

## PS 1239 - System of Works Prioritisation

The following system for prioritising maintenance works has been developed in recognition that the available funding is often insufficient to perform all desired work.

The method does not apply to the assignment of Length-Persons, where the decision to put road sections under this form of maintenance is likely to be based on considerations that include the existing condition of the road and other social factors. An amount for Length-Person expenditure will normally be fixed for the Network, with the remaining budget apportioned using the prioritisation procedure.

The method relates the importance of the maintenance activity to the importance of the road. Roads are ranked according to whether they are bitumen paved and by classification category. This places strategic paved roads within urban centres at the top in order of importance with unclassified roads at the opposite extreme.

Maintenance work activities have been ranked in the following order of importance:

**Emergency:** Urgent repairs to blocked or impassable roads including bridge redecking etc. Removal of debris and stabilisation of side slopes that threaten to close the road or endanger life etc.

**Road Surface Repair (Bitumen):** Pothole repair, edge break repair, crack sealing etc.

**Drainage (Routine):** Ditch and culvert clearing, shoulder trimming, repairs to erosion damage, etc.

**Drainage (Recurrent):** Structural work (concrete, masonry, gabions etc.), new pipe culverts, subsoil drains etc.

**Road Surface Repair (Unpaved):** Spot repairs, grading, reshaping, rehabilitating etc.

**Other Routine Work:** Grass cutting, road signs and markings, etc.

The matrix overleaf indicates how the classification of maintenance activities is related to the classification of roads. Maintenance activities are numbered from 1 (highest priority) to 42 (lowest priority). The matrix is applied to the list of roads within the allocated Network to produce a ranked list of works. Whilst this will produce a rational and consistent order of priority it should not be considered inflexible and it is recognised that there may be special and localised reasons for making adjustments.

Proceeding down the list of prioritised works, the amount, extent and necessity for each category will be determined with the aid of Target Serviceability Standards set out in PS 1238. Works in the order of the prioritised list are then performed each month to the limit of the monthly budget allocation.

CATEGORY OF TERM MAINTENANCE ACTIVITY	PRIORITY							
	ROAD GROUP							
	Urban Paved ' M'	Rural Paved ' M'	Other Rural Paved	Other Urban Paved	Other Secondary	Other Tertiary	District	Unclassified
Emergency	1	2	3	4	5	6	10	11
Road Surface Repair (Bitumen)	7	8	9	12	13	14		
Drainage (Routine)	15	18	21	22	23	24	25	39
Drainage (Recurrent)	16	19	26	27	28	29	30	40
Road Surface Repair (Unpaved)					31	32	33	41
Other Routine Work	17	20	34	35	36	37	38	42

Adapted from Overseas Road Note 1 and 20

Figure PS 1239 - Matrix of Maintenance Priorities

#### **PS 1240: LAND AVAILABLE**

The land available to the Contractor free of charge shall be as follows:

- (i) The land occupied by the Permanent Works
- (ii) The land occupied by approved (usually existing and public) temporary diversion routes
- (iii) The land indicated on the Drawings or subsequently approved (usually public) by the Engineer as borrow areas for materials for pavement construction or as quarries for stone.
- (iv) The land occupied by approved (usually existing and public) access roads to (iii) above.
- (v) The land required for housing, plant-yards, workshops and offices after approval has been given for the locations and layouts of such installations.
- (vi) Subject to the approval of the Engineer, any land lying within the boundaries of the road reserve (generally 60 m in rural areas and 24 m in urban areas, total width, centred on the road centreline) may also be made available to the Contractor as working space or borrow areas for fill material. In forest plantations the width available to the Contractor will be 17.5 m on either side of the centreline.

The Contractor shall make all negotiations and pay all necessary compensation fees for any additional land he may require, including borrow areas for fill material outside the road reserve (if approved by the Engineer).



The land available to the Contractor is not necessarily the land to be cleared, which shall be indicated by the Engineer. The costs of clearing for the purpose of borrowing material, opening access roads, working space, or any other purpose or work not forming part of the Permanent Works shall be borne by the Contractor.

**PS 1241:      COMPENSATION**

The costs of agreed compensation for disturbance of buildings, crops, trees and relocation of fences and services within the land available free of charge shall be paid by the Contractor through the Contract and he shall be reimbursed net under the relevant items in the Bill of Quantities.

The cost of all other compensation shall be borne by the Contractor.

The Contractor shall cooperate with the appropriate authorities and shall make all necessary arrangements to agree compensation. Construction of the Works shall not commence until compensation has been agreed.

**PS 1242:      GRAVES AND TOMBS**

Areas which contain graves and/or tombs within the Site shall be cleared by the Contractor, who shall seek assistance from the District Commissioner to obtain the consent of the Village Authorities to enter into each of such areas for the removal and reburial of corpses and remains. Compensation to the Village Authorities, if any, shall be reimbursed to the Contractor through the Contract under the relevant item in the Bill of Quantities.

**PS 1243:      COPIES OF SUPPLY ORDERS**

The Contractor shall provide the Engineer with copies of all orders for the supply of materials and goods required in connection with the Works.

**PS 1244:      DRAWINGS**

Where applicable, the Contractor shall be issued with two copies of each of the Drawings forming part of the Contract documents, as well as with two copies of any further drawings which may be issued by the Engineer from time to time. Any additional copies of drawings required by the Contractor may be purchased from the Engineer.

**PS 1245:      AMENITY AND ACCESS**

The Contractor shall ensure that, in carrying out the Works, he causes no damage by plant, workmen, flooding, dust, subsidence or otherwise to property. He shall take all precautions to the satisfaction of the Engineer to ensure that such hazards are avoided and public amenity maintained. The Contractor shall make good, forthwith and at his own cost, any damages and inconveniences caused by him; failing to do which the matter shall be treated under Sub-Clause 7.1 of the General Conditions of Contract, as amended, and the Employer shall be entitled to employ and pay other persons to carry

out the same, and all costs shall be recoverable from the Contractor by the Employer in accordance with such sub-clause.

**PS 1246: DUST CONTROL**

The Contractor shall take appropriate measures to protect the Works and adjacent private and public property from dust contamination and nuisance.

**PS1247 REPORTING OF ACCIDENTS**

The Contractor shall report every accident which occurs on the road, within the extent of the Works, to the Engineer within twenty-four (24) hours of such accident, irrespective of whether such accident has a bearing on the damage to the works or to persons, property or things. The report must be in writing and must contain full particulars of the accident. Photographs of each accident shall also be included in the report. The Engineer has the right to conduct any or all enquiries, on either the Site or elsewhere, as to the causes and consequences of any such accident. The Contractor shall also keep a comprehensive record of all accidents which occur on the road and shall make such records available to the Engineer on demand."

**PS 1248 MAXIMISING THE USE OF LABOUR**

This Contract has been established and shall be priced as equipment-based type of road works project. However, the Roads Authority is desirous of making a contribution towards reducing the level of unemployment in the project area. To this end, the following items of work have been identified as suitable for maximising the use of manual labour.

- (a) Bush clearing and the removal of roots from the surface after grubbing has been done by machine, and loading of such roots for transport to disposal areas.
- (b) Excavation and backfilling for culverts, kerbs and channels, including for removal of existing units, all to a maximum depth of 1,5m.
- (c) Excavations for guardrail posts, road sign footings, guide blocks and erosion protection works, all to a maximum depth of 1,5m.
- (d) Constructing gabion baskets and stone pitching.
- (e) Placing of kerbs and concrete edging.
- (f) Erection of road signs.
- (g) Base correction.
- (h) Back chipping during surfacing operations.
- (i) Trimming of cut slopes, and final trimming of shoulder breakpoints and fill slopes.
- (j) Trimming of open drains, side drains, inlet and outlet channels of culverts.
- (k) Trimming of catch - water drains, mitre banks and mitre drains.
- (l) Finishing off the road, road reserve and borrow pits.

Tenderers are required to submit a tender for the Works under the condition that at least the items listed above must be done using manual labour. Additional information and suggestions which will further the use of labour will be viewed in a positive light.

The Employer is also desirous of making a contribution towards equal opportunities for women, not only in respect of labour, but also throughout the human resource base of the Contract. No gender restrictions shall apply throughout the workforce. In respect of the latter and as far as is practicable, the Contractor is required to employ at least 15% of his unskilled labour force from the feminine gender. In addition, only Malawian citizens shall be employed in the Contractor's unskilled labour force.

#### **PS 1249      HIV/ AIDS PREVENTION PROGRAMME**

The contractor shall from the commencement of the contract through his SHE-Officer implement a generic HIV/AIDS awareness training programme for all permanent and temporary workers of the main contractor and all subcontractors. The type of training; the number of trainees and the cost of all training shall be as agreed by the Employer and the Engineer.

The training material for the structured training programme shall, as far as possible, be accredited by the appropriate Government of Malawi Authority and be delivered by suitably qualified and accredited trainers. The training programme shall be subject to the approval of the Employer and the Engineer, and the Contractor shall if so instructed by the Engineer, alter or amend the programme and course content.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the training programme, including the following:

- Transport of the selected workers( as necessary)
- Stationery and all other necessary materials.

No separate payment will be made for the training venue and everything necessary for the delivery of the training.

All Training shall take place during normal working hours and the Contractor shall make adequate allowance in his programme of work to accommodate the training to be provided. All selected workers shall be remunerated in respect of all time spent undergoing skills training. The SHE-Officer must make sure that the specified workers attend the HIV/AIDS Prevention training courses.

The Contractor shall keep comprehensive records of the training given to each worker and whenever required shall provide copies of such records to the Engineer. At the successful completion of a course, each candidate shall be issued at the Contractor's own cost with a certificate.

The Contractor shall ensure that all attendees sign an attendance register, and shall provide the Engineer with a copy of the attendance register the day after each course. The SHE-Officer shall prepare a quarterly report on the programme.

## SECTION 1300 CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

### PS 1303: Payment

#### PS 13.01: The Contractor's General Obligations

Add the following paragraph after the fourth paragraph (numbered as (iii):

(iv) The combined total amount of pay item 13.01(a), 13.01(b) and 13.01(c) shall not exceed 15% of the tender sum

**Add the following new pay items:**

PS 13.02:	Authorised Compensation	Unit
(a)	Provisional Sum for Authorised Compensation.....	Provisional Sum
(b)	Handling Cost and profit in respect of item PS 13.02(a).....	%

The contractor has to enter the percentage in the rate column and then calculate the amount for pay item PS13.02 (b)

#### PS13.03: Relocation of Services:

- |     |   |                 |
|-----|---|-----------------|
| (a) | Provisional sum allowed for the protection and relocation of services ..... | Provisional sum |
| (b) | Handling Cost and profit in respect of item PS13.03(a).....                 | %               |

The contractor has to enter the percentage in the rate column and then calculate the amount for pay item PS13.03 (b)

The provisional sum allowed under sub item (a) shall be expended to cover the actual costs for the protection and moving of services by the Contractor and others.

The provisional sums shall be expended only with the approval of the Engineer.

#### PS 13.04: Construction of Sign Boards.....No.

The unit of measurement shall be number of construction sign boards supplied.

The tendered rate shall include full compensation for procurement, erection and removal of construction sign boards after completion of the project.

The sign board has to comply with the particular drawing.

### PS 13.05: Contractor's Environmental Obligations

- (a) Fixed obligations .....lump sum
- (b) Time-related obligations.....month

The lump sum tendered under Item PS13.05 (a) shall represent full compensation for the fixed part of the Contractor's obligations in respect of environmental matters for the Contract, i.e. that part which is substantially fixed and not a function of the time required for the completion of the contract or of the value of the work.

Payment of the lump sum tendered under Item PS13.05(a) shall be effected in the same manner as that described in Clause 1303 of the Specifications for Item 13.01(a).

The monthly rate under item PS13.05 (b) shall represent full compensation for the time-related part of the Contractor's Environmental obligations as specified in the Environmental Regulations in Clause PS 1239 of the Project Specifications and elsewhere in the contract documents, for which payment is not included under other Pay Items.

Payment of the tendered rate per month for Item PS13.05 (b) will be subject to the same terms and conditions as are described in Clause 1303 of the Specifications for Item 13.01(c).

Payment will be made monthly over the full Time for Completion, as defined in the General Conditions of Contract.

Where the Contractor does not comply fully with his environmental obligations, and where he has been notified to that effect in writing at least three times since the Commencement Date, he may forfeit payment in terms of Clause PS 1239 of the Project Specifications.

- (c) Public Awareness Programmes
  - (i) Television and Radio Broadcast and Print Media Publications .....P.S.
  - (ii) Handling costs and profit in respect of sub-items PS13.05(c)(i)
    - (stated as % and extend as an amount)..... %

The provisional sum for sub-item PS13.05(c)(i) allows for the provision of the Public awareness programmes and activities provided as specified in the document. This money shall only be expended on the direct instruction of the Engineer. The reimbursement shall be for the final invoice amount from the public awareness service providers (excluding VAT).

The provisional Sum allowed for pay item PS13.05(c)(i) is to remunerate the public awareness service providers at a rate agreed by the Roads Authority. The reimbursement shall be for actual costs incurred.

The percentage tendered for pay item PS13.05(c)(ii) shall be applied to the amounts expected under pay items PS13.05(c)(i) to generate an amount that covers all the monies required by the Contractor for managing the public awareness activities, paying the media service providers, and any other costs that may arise from these payments, including any Contractor's profits and overheads

**PS 13.06: Contractor's Health Obligations**

- (a) Fixed obligations.....lump sum
- (b) Time-related obligations.....month

The lump sum tendered under Item PS13.06 (a) shall represent full compensation for the fixed part of the Contractor's obligations in respect of health matters including HIV and AIDS awareness for the Contract, i.e. that part which is substantially fixed and not a function of the time required for the completion of the contract or of the value of the work.

Payment of the lump sum tendered under Item PS13.06(a) shall be effected in the same manner as that described in Clause 1303 of the Specifications for Item 13.01(a).

The monthly rate under item PS13.06 (b) shall represent full compensation for the time-related part of the Contractor's Health obligations as specified in the Special Conditions of Contract Clause 64.

Payment of the tendered rate per month for Item PS13.06 (b) will be subject to the same terms and conditions as are described in Clause 1303 of the Specifications for Item 13.01(c).

Payment will be made monthly over the full Time for Completion, as defined in the General Conditions of Contract.

Where the Contractor does not comply fully with his health obligations, and where he has been notified to that effect in writing at least three times since the Commencement Date, he may forfeit payment.

**PS 13.07 Contractor's mobilisation per emergency or urgent call out.....No.**

The unit of measurement shall be the number of call outs by the Employer or his representative in cases of emergency or other urgent reasons.

The tendered rate shall include full compensation for transport of the required staff and construction materials to the relevant site. The payment of the rate implies immediate response to the call out. Compensation for transportation of equipment shall be covered under Day Works, item 18.05.

**SECTION 1400 HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S  
SITE PERSONNEL**

**PS1407 MEASUREMENT AND PAYMENT**

***Create the following pay items***

**PS14.15 Survey equipment for use by the Engineer.....month**

- ✓ The unit of measurement for the maintenance of the survey equipment including software programme shall be the month.

The tendered rate shall include full compensation for the supply and maintenance of the equipment. The tendered sum per month will be payable for as long as the equipment is required, but not after the official completion date of the contract.

**PS14.20 Provision of semi-skilled labour for use by the Engineer**

(a) Provision of Labourers.....provisional sum(P/sum)

(b)Charges and profit in respect of PS14.20 (a)

(State % and extend as an amount)..... percentage (%)

Payment under Item PS14.20 (a) shall be made monthly and the amount due to the Contractor will be equal to the total of the actual amount paid to the Engineer's semi-skilled labourers plus the direct cost of medical and pension benefits, Workmen's Compensation, sick leave and holiday pay, incurred by the Contractor in respect of the Engineer's semi-skilled labourers. The Contractor shall advise the Engineer of the full monthly cost for each semi-skilled labourer engaged. No payment other than that provided above will be made in respect of the employment of semi-skilled labourers for the Engineer. Contract price adjustment will not apply to this item.

**PS14.21 Provision of Length – Person**

(a) For roads in rural areas.....man-month

(b) For roads in urban areas.....man-month

The unit of measurement shall be person-months based on a calendar month, assuming continuous assignment and full-time availability, and that the prioritised list of tasks is attended to in a diligent manner. Payment shall include for all training and supervision, direct and indirect costs of providing the length-person, the provision, maintenance and replacement as required, of the basic tools stipulated above, protective clothing, wages, allowances, transport (where required), attending for inspections, providing freely available materials such as suitable fill, and all incidentals necessary to complete the work as specified.

## **SECTION 1500 ACCOMMODATION OF TRAFFIC**

### **PS1502 GENERAL REQUIREMENTS**

✓ **Add the following new sub – clauses:**

**(i) Moving and display of signs**

The Contractor shall adhere strictly on the sign layout and spacing shown on the drawings or directed by the Engineer. Any sign not required for or which is in contradiction with the prevailing situation, shall be removed or covered with non-transparent material without delay. Where permanent signs are to be covered it shall be done with non-plastic material.

**(j) Failure to comply with provisions for the accommodation of traffic**

The failure of or refusal by the Contractor to construct and / or maintain diversions, barricades, traffic signs or road markings at the proper time, or to take the necessary precautions for safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause to suspend payment on this contract until the required construction or maintenance has been completed to the satisfaction of the Engineer considering that there is a risk to the public. Such stoppage of the payment will not be acceptable as a reason for extension of time or additional compensation.

### **PS1503 TEMPORARY TRAFFIC-CONTROL FACILITIES**

✓ **Add the following after the second paragraph:**

No work may proceed in any section where accommodation of traffic is required until such time as the relevant requirements with regard to sign posting are met. The Contractor shall keep sufficient surplus signs, delineators and barricades on the site to allow for the replacement of damaged or missing items within a period of three hours of instructions having been given by the Engineer.

**(a) Traffic-control devices**

✓ **Add the following:**

Sufficient flagmen suitably trained and equipped as detailed in sub-clause (g) below, shall be provided at all designated access points on public road to and from the working areas to the satisfaction of the Engineer. The flags shall be at least 750 mm x 500 mm on a stick of adequate length.

When movable temporary signs are used, provision shall be made for sandbags on the sign bases to prevent the signs from being overturned by wind or eddies behind moving traffic, as detailed in sub-clause (h) below.



**(b) Road signs and barricades**

✓ ***Add the following:***

Retro-reflective material for temporary road signs shall comply with the requirements of SABS 1519.

The retro-reflective coefficients determined according to the methods of SABS 1519, shall be at least 60% of the values given in Table 1 of SABS 1519.

The classes shall be as specified in Sub-clause 5402 (g) of the Standard Specifications.

Road signs that do not comply with these standards shall be cleaned and re-tested or removed from the site and replaced with approved road signs.

**(c) Channelization devices and barricades**

✓ ***Add the following:***

Delineators shall comply with the following requirements:

- (i). A minimum contrast ratio of 4 shall exist between the yellow call 1 retro-reflective material and the black non-reflective material.
- (ii). Delineators shall be affixed in a flexible manner to the base units and shall be able to withstand wind speeds of at least 60 km/h without overturning. The bases shall be stabilised by placing of sandbags.
- (iii). The bottom edge of the delineator shall not be more than 200 mm above the road surface.

Cones (red-orange, fluorescent) with minimum height of 750 mm may be used as supplementary traffic-control facilities to delineators, but only for short-term lane deviations during daylight. Lane closures or deviations continuing into night time shall be demarcated by delineators. The maximum spacing between delineators or cones is 30 m.

✓ ***Add the following sub-clauses:***

**(g) Worker clothing and safety jackets**

All construction workers shall wear high visibility clothing when on the construction site. Any worker working on or adjacent to a trafficked road shall wear a safety jacket (reflective vests). Overalls shall be either orange or red-orange or yellow in colour with retro-reflective strips. Raincoats shall be bright orange or red-orange.

In addition all flagmen are to be distinctly dressed in high visibility orange overalls, a safety jacket similar to those worn by traffic officers as supplied by Sparks and Ellis or similar approved. Safety jackets shall also be made available to the Engineer and all his staff free of charge.

**SECTION 1600 OVERHAUL**

**PS1601 Scope**

- ✓ ***Free-haul distance for this contract will be unlimited. Subsequently no separate payment will be made for overhaul irrespective of the material or the distance hauled.***

## **SECTION 1700      CLEARING AND GRUBBING**

### **PS1701      Scope**

#### **Add the following to this Clause:**

This section also includes the cutting of grass and bushes along the road to improve visibility. The grass, shrubs and bush shall be cut 50 mm to 100 mm above the ground. The width of cutting shall be 3m to 10m from the edge of the road where grass starts to grow or as directed. This scope shall also include the cutting of tree branches leaning onto the road wherever applicable.

The scope of works shall also include excavation and disposal of any debris in the road reserve

The scope of works shall also include the treatment of anthills, .

### **PS1703      EXECUTION OF THE WORK**

#### **(a)      Areas to be Cleared, Grubbed and Stripped**

At the end of this sub-clause add the following:

Removing topsoil too far in advance of excavation or filling operations may also cause re-clearing and re-grubbing. Payment for clearing and grubbing shall be made only once. Re-clearing and re-grubbing shall be at the Contractor's own cost.

#### **(b)      Cutting of Trees**

At the end of this sub-clause add the following:

Individual trees designated in writing by the Engineer shall be left standing and uninjured. A penalty of MK100,000.00 shall be imposed for every tree which is unnecessarily removed or damaged. The branches of trees to be left standing shall be trimmed so as to leave a 7 m clearance above the carriageway.

### **PS 1704: Measurement and Payment**

#### **Add the following new pay items:**

#### **PS 17.04: Cutting and removal of tree branches.....No.**

If necessary and as instructed by the Engineer, tree branches shall be cut in sections from the top downwards. The branches to be left standing shall be trimmed so as to have a 7m clearance above carriageway. Necessary precaution shall be taken to prevent damage to structures and other private and public property. Individual trees designated in writing by the Engineer shall be left standing and uninjured.

The unit of measurement shall be number of tree branches exceeding 300mm girth cut. The girth shall be measured at the narrowest point of the tree or branch. The tendered rate shall include full compensation for all work necessary for the cutting, removal and disposal of all material.

**PS 17.05: Clearing and grubbing, demolition of existing structures**

Item	Unit
PS 17.05(a): Masonry structures.....	metre (m <sup>3</sup> )
PS 17.05(b): Concrete structures .....	metre (m <sup>3</sup> )
PS 17.05(c): Brickwork .....	metre (m <sup>3</sup> )
PS 17.05(d): Gabions .....	metre (m <sup>3</sup> )

The tendered rate shall include full compensation for demolition of the existing structures and disposal of the waste material from site including unlimited haulage costs.

**PS 17.06: Debris Excavation and Disposal.....Cubic Metre (m<sup>3</sup>)**

In areas designated by the Engineer the Contractor shall remove and spoil outside the road reserve area, soil which is deemed unsuitable. The limits to the areas considered to contain unsuitable materials shall be measured and ground elevations taken by the Engineer before and after excavation. The contractor shall dispose the unsuitable material in a location acceptable to the Engineer.

The volume of excavation shall be calculated in cubic metres using the Average End Area method and the result of these calculations shall form the basis for payment for this item. The unit price paid per cubic metre shall be full compensation for all costs related to excavation, loading, hauling and disposing of the unsuitable material including levelling as directed by the Engineer. No overhaul will be paid for this material.

**PS 17.07: Shrubs and Grass Cutting.....Square Metre**

Measurement shall be in square metres. Length shall be measured along the centre line of the road. The width shall generally be measured from the shoulder break point into the road verge as instructed by the Engineer. Excessive shrubs shall be determined case by case by the Engineer whether to include in the shrubs and grass cutting rate or to pay as a unit item under bush clearing (PS 17.08)

**PS 17.08: Bush Clearing.....Square Metre**

Measurement shall be in square metres. The quantity shall be taken as the area in square metres within the road reserve as designated by the Engineer and cleared by manual labour in accordance with these specifications. The tendered rate shall include full compensation for all work necessary for the clearing, removal and disposal of all cleared material.

PS	17.09	Treatment	of
Anthills.....		Number	

Where anthill material is encountered within the road prism, the contractor shall excavate to a depth of 0.6m below existing ground level over an area as directed by the Engineer. The excavated area shall be treated with an approved pesticide and backfilled with suitable material compacted to specifications.

The rate of payment shall be the number of anthills treated. This rate shall cover the provision of labour, tools, approved pesticides, road signs and safety devices. Excavation and backfilling shall be paid for under their appropriate pay items

✓ **Create the following new section:**

## **SECTION PS 1800: DAY WORKS**

### **PS1801 SCOPE**

This section covers the listing of day work items in accordance with the General and/or Special Conditions of Contract determining payment for work which cannot be quantified in specific units in the Schedule of Quantities, or for work ordered by the Engineer during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Schedule of Quantities.

### **PS1802 ORDERING OF DAYWORK**

No day work shall be undertaken unless written authorisation has been obtained from the Engineer.

### **PS1803 MEASUREMENT AND PAYMENT**

<b>Item</b>	<b>Unit</b>
<b>PS18.01 Personnel during normal working hours</b>	
(a) Unskilled labour . . . . .	hour (h)
(b) Semi-skilled labour . . . . .	hour (h)
(c) Skilled labour . . . . .	hour(h)
(d) Ganger . . . . .	hour (h)
(e) Flagmen. . . . .	hour (h)
(f) Surveyor . . . . .	hour(h)
(g) Lab technician . . . . .	hour(h)

<b>Item</b>	<b>Unit</b>
<b>PS18.02 Personnel outside normal working hours</b>	
Outside normal working hours .	
(a) Unskilled labour . . . . .	hour (h)
(b) Semi-skilled labour. . . . .	hour (h)
(c) Skilled labour. . . . .	hour (h)
(d) Ganger.. . . .	hour (h)
(e) Flagmen.. . . .	hour (h)
(h) Surveyor . . . . .	hour (h)
(i) Lab. Technician . . . . .	hour (h)

Item		Unit
<b>PS18.03</b>	<b>Plant</b>	
(a)	Tip Truck 6m <sup>3</sup> . . . . .	hour (h)
(b)	Tip truck 10m <sup>3</sup> . . . . .	hour (h)
(c)	Motor grader (type specified) . . . . .	hour (h)
(d)	Wheeled loader (type specified) ...	hour (h)
(e)	Water bowser – self propelled (capacity specified)	hour (h)
(f)	Vibratory roller . . . . .	hour (h)
(g)	Pneumatic roller . . . . .	hour (h)
(h)	Grid roller with tractor (type specified)	hour (h)
(i)	Tractor (type specified) . . . . .	hour (h)
(j)	Tracked excavator (type specified) . . . . .	hour (h)
(k)	Bulldozer (type specified) . . . . .	hour (h)
(l)	Excavator . . . . .	hour (h)
(m)	Concrete Mixer . . . . .	hour (h)
(n)	Water Pump. . . . .	hour (h)

The unit of measurement for items PS18.01 to PS18.03 shall be the hour for the item of plant or personnel. Non- working hours for the plant breakdown, lack of operator or any other reason shall not be measured. The item shall be taken from the time that the personnel and /or plant depart until return.

Measurement shall only be for work instructed and directed by the Engineer where the Engineer consider no other appropriate rates is available in the schedule of quantities. Prior to the commencement of any work by the labourers described under items PS18.01 and PS18.02, the Contractor must obtain written consent from the Engineer regarding the classification of all labourers in terms of “unskilled”, “semi skilled”, and “skilled labourers”

The tendered rates for labour for the items PS18.01 and PS18.02 shall include full compensation to cover overhead charges and profit, leave pay, bonuses, subsistence allowances, Employer’s contributions, additional payment for over overtime where applicable, insurances, housing, site supervision, use of small hand tools and appliances, non-mechanical plant, operative and contingent costs relating to the supply of personnel.

The tendered rates for Plant for item PS18.03 shall be all-inclusive hire charge for the use of trucks or plant/equipment including driver or operator and shall apply only to vehicles, plant and equipment nominated in writing by the Engineer. The tendered rate for item PS18.04 shall include full compensation for the operating costs including fuel, maintenance, depreciation, administrative and contingent costs as well as profit

<b>Item</b>	<b>Unit</b>
<b>PS18.04            Materials</b>	

- |   |                         |
|---|-------------------------|
| (a) Procurement of materials.....   | Provisional Sum (P/Sum) |
| (b) Contractor's handling costs, profit and all other charges in respect of sub item PS18.04(a). .... | Percentage (%)          |

The Unit of measurement for sub-item PS18.04(a) shall be the amount actually paid for the procurement of materials to be purchased and shall be made in accordance with the provision of the General Condition of Contract. Only the actual quantities of materials used, as verified by the Engineer, shall be paid for.

The percentage tendered for sub-item PS18.04(b) shall be the percentage of the amounts actually paid for the procurement of the materials as ordered under the sub-item PS18.04(a) and shall be in full and final compensation in respect of the Contractor's handling costs, profit, and all other charges in connection with the procurement and supply of the materials to the point of usage.

<b>Item</b>	<b>Unit</b>
<b>PS18.05            Transport</b>	

- |                             |                |
|-----------------------------|----------------|
| (a) LDV. . . . .            | kilometre (km) |
| (b) Flatbed Truck . . . . . | kilometre (km) |
| (c) Lowbed Truck .....      | kilometre (km) |

The unit of measurement for item PS18.05 shall be the kilometre distance that the vehicle travelled for transporting personnel and/or Plant. All travelling shall be approved by the Engineer.

The tendered rate for item PS18.05 shall include full compensation for the cost of the vehicle including fuel, maintenance, depreciation and running costs.

The above-mentioned tendered rates shall be in full compensation for the various items, as specified and not additional compensation shall be considered.

## **SECTION 2100 DRAINS**

### **PS2103 BANKS AND DYKES**

***Add the following after the last paragraph***

“Mitre banks, catch water banks and dykes shall be constructed using manual labour with the exception of hauling operations when haul distance in the opinion of the Engineer preclude the use of wheel barrows.

The Contractor may, however, construct certain banks and dykes using conventional plant based methods where manual methods are not feasible provided that his reasons for using these conventional methods are adequately motivated in writing and approved by the Engineer.

Work executed using manual labour will be measured and paid for separately from work carried out using conventional methods.”

### **PS2107 MEASUREMENT AND PAYMENT**

***Add the following items:***

<b>Item</b>	<b>Unit</b>
<b>PS21.20 Excavation for open drains using manual labour:</b>	
(a) Hand excavation soft material situated within the following depth ranges below the surface level:	
(i) 0m up to 1.5m.....	cubic metre (m <sup>3</sup> )
(b) Extra over sub-item PS21.20 (a) for excavation in the following classes of material, irrespective of depth:	
(i) Hand excavation of intermediate material.....	cubic metre (m <sup>3</sup> )

The unit of measurement shall be the cubic metre of material excavated using manual labour in accordance with the authorised dimensions, measured in place before excavation. Excavation for open drains only as defined in Sub-clause PS2102 shall be measured.

Irrespective of the total depth of the excavation, the quantity of material in each depth range shall be measured and paid for separately.

The tendered rates shall include full compensation for using manual labour for excavation of the material to the required lines, levels and grades, trimming and the disposal of the material as directed.

For payment purposes a distinction shall be made between the various classes of material.



	Item	Unit
<b>PS21.21</b>	<b>Banks and Dykes using manual labour.....</b>	<b>cubic metre (m<sup>3</sup>)</b>

The unit of measurement shall be the cubic metre of material placed by manual labour, measured in place in the banks or dykes, and calculated in accordance with the authorised dimensions.

The tendered rate shall include full compensation for using manual labour for procuring, furnishing, placing, watering, compacting, shaping and trimming the material in the banks and dykes.

**PS 21.22 Drain Clearing:**

(a) Line Drains

(i) < 500 mm bottom width.....metre

(ii) > 500 mm bottom width.....metre

(b) Unlined Drains

(i) < 1000 mm .....metre

(ii) > 1000 mm .....metre

This item shall include the removal of debris, sediment and other obstructions from the side drains using hand tools and labour. It shall also include the restoration of geometry and hydraulics of the side drains to ease the flow of water. Soil excavated from the drain shall be taken to spoil beyond the side drain where it shall not wash back to the side drain.

**PS 21.23 Drain Blading:**

(a) < 1000 mm .....metre

(b) > 1000 mm .....metre

The task comprises the mechanical cleaning and reshaping of unlined (earth) roadside and mitre drains by motor grader. The technique is suited to V-shaped and relatively wide flat-bottomed ditches. Trimmed material is moved well clear of the highway to the rear side of the drain where it cannot wash back into the drain.

The works shall be measured in metres (m) of drain run, existing and new turnouts, measured individually on each side of the road. This shall include all necessary handwork in the vicinity of obstructions and where access is constrained, and for the complete removal and disposal of trimmed materials including haulage off-site where necessary. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**SECTION 2200: PREFABRICATED CULVERTS****PS2203 MATERIALS**

✓ *Add the following sub-clause:*

**(j) Steel reinforcement**

Steel reinforcement for inlet and outlet structures, manholes and other appurtenant structures shall comply with the requirements of section 6300 of the standard specifications.

**PS2204 CONSTRUCTION METHODS**

✓ *Add the following to this sub-clause:*

✓ *Culverts shall be constructed using the trench method as described in paragraph (a)*

**PS2211 BACKFILLING OF PREFABRICATED CULVERTS**

✓ *Amend the first paragraph of sub-clause (a) to read as follows:*

The material used for the back-filling alongside the culvert shall be selected material of at least G7 quality. Where the excavated material is not of adequate quality selected material shall be imported for this purpose. The material placed over the top of the culvert shall be of the same quality as that of the road pavement at a similar depth but in any event of at least G7 quality."

**PS2218 MEASUREMENT AND PAYMENT**

*Add the following new pay items*

Item	Unit
<b>PS22.29 Excavation for culvert using manual labour</b>	
(a) Hand excavation, soft material situated 0m up to 1.5m below the surface level.....	cubic metre (m <sup>3</sup> )
(b) Extra over sub-item PS22.29(a) for excavation in intermediate material irrespective of depth.....	cubic metre (m <sup>3</sup> )

**PS22.30 Backfilling using manual labour**

- (a) Using the excavated material.....cubic metre (m<sup>3</sup>)
- (b) Using imported selected material.....cubic metre (m<sup>3</sup>)
- (c) Extra over sub-item PS22.30 (a) and (b) for soil cement  
backfilling (5% cement).....cubic metre(m<sup>3</sup>)
- (d) Concrete backfill (Class 15/19).....cubic metre(m<sup>3</sup>)

**PS 22.31 Culvert Cleaning:**

- (a) Pipe Culverts
  - (i) < 600 mm diameter.....metre
  - (ii) > 600 mm diameter.....metre
- (b) Box Culverts
  - (i) < 900 x 600 mm .....metre
  - (ii) > 900 x 600 mm .....metre

The unit of measurement shall be the running metre of culvert cleaned. The tendered rate per metre shall include the cutting of vegetation at least 3m distance in both the down stream and up stream channels of the culvert. It also includes the removal of debris, sediment and other obstructions from the culvert barrel, inlet and outlet structures. If in the course of cleaning the culvert any damages to the culvert, such as broken or dislocated pipes, eroded aprons, undermining, etc., are noticed, these will be dealt with under relevant pay items and shall be treated as additional works. The rate shall also include full compensation for all the costs associated with the disposal of the excavated debris, sediments and obstructions off site.

**PS 22.32 Removal of graffiti from structures.....square metre**

The unit of measurement shall be the area of the restored surface cleaned on instruction from the Engineer.

The tendered rate shall include full compensation for all labour, cleaning materials, patent products (e.g. Synchrokleen or similar), equipment, transport and overheads necessary for restoration of the surfaces.

**SECTION 2300      CONCRETE KERBING, CONCRETE CHANNELLING, OPEN  
CONCRETE CHUTES AND CONCRETE LININGS FOR OPEN DRAINS**

**PS2302      MATERIALS**

**(d)      Bedding material**

✓      ***Add the following:***

A class 15/13 semi-dry concrete mix shall be used unless otherwise directed by the Engineer

**PS 2307      MEASUREMENT AND PAYMENT**

✓      ***Add the following to pay item 23.07***

**PS23.07**      The trimming of excavation for concrete lines or for cement mortared stone masonry open drains should be done by using manual labour.

✓      ***Add the following to pay item 23.08***

**PS23.08**      The tendered rate for surface finish shall also include full compensation for the required formwork as described in pay item 23.09.

✓      ***Add the following new pay item :***

**PS 23.09      Lining of drains**

- (a).      Lining for open channel horizontal or inclined with stone masonry to a thickness between              250              and              350              mm              including pointing.....square metre

The unit of measurement shall be the square metre of masonry built. The tendered rate per square metre shall include full compensation for the construction material including transport to site, the masonry work completed as specified.

## **SECTION 2500      PITCHING, STONework AND PROTECTION AGAINST EROSION**

### **✓      *Add the following to Clause 2501 – Scope:***

This section covers also the hand repair of erosion gullies and minor slips occurring in road shoulders, verges or drain sides. The work involves the trimming and preparing of the cuts and reinstating with compacted selected fill in order to achieve the original feature shape. The repair of the cut should be made after investigation and corrective works to prevent further concentration of water flows at the location (performed as a separate Item).

The construction of check dams in the road side ditches will be required on steep grades where the in-situ material is very erodible. Therefore at locations designated by the Engineer, the Contractor will build masonry check dams in the road side ditches as instructed by the Engineer.

### **PS 2509**

#### **Add the following clause:**

**Material underlying the stone pitching shall be adequately compacted as directed by the Engineer**

### **PS25.08      MEASUREMENT AND PAYMENT**

#### **✓      *Add the following new pay item to 25.01 Stone Pitching:***

#### **PS 25.01(e)    Mortar Stone Pitching:.....m<sup>2</sup>**

The unit of measurement shall be the square metre of mortar stone pitching. The tendered rate per square metre shall include full compensation for the construction material including transport to site, the pitching work completed as specified to a thickness between 250 and 350 mm including pointing.

#### **✓      *Add the following new pay items***

#### **PS 25.08      Erosion Damage Repair:.....m<sup>3</sup>**

The works shall be measured in cubic metres (m<sup>3</sup>) of compacted backfill material including that used to reinstate benches, accepted in place after compaction. Physical measurements of length, breadth and thickness of the hole shall be recorded and comprise a pre-estimate of the necessary work including the backfilling of all cut benches. Sufficient sections shall be measured to give an accurate representation of the actual work performed. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 25.09      Check      Dams:.....Cubic  
Metre**

The unit of measurement shall be the cubic metre of masonry built. The tendered rate per cubic metre shall include full compensation for the construction material including transport to site, the masonry work completed as specified to a thickness between 250 and 350 mm including pointing. Backfilling in between successive check dams if required shall be paid for under the appropriate pay items.

**SERIES 3000: EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONE**

**SECTION 3100: BORROW MATERIALS**

Delete the entire Section and insert the following requirements which shall apply:

- a) The Contractor shall obtain materials of the specified quality from any source of their choice.
- b) Prior to opening any borrow pit or quarry, the Contractor shall submit to the Engineer a scanned original of the mining permit or a copy certified by the Chief Mining Engineer.

**No separate payment shall be made for this item. Payment shall be built in the related work items.**

**The quantity under which item (b) above will apply, shall be as determined or directed by the Engineer**

**SECTION 3200 SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIAL FROM BORROW PITS AND CUTTINGS, AND PLACING AND COMPACTING THE GRAVEL LAYERS**

**PS3202 SELECTING THE MATERIALS**

***Add the following:***

The quality of the materials in the borrow pit is inconsistent. Good quality material is often limited to small pockets. It may therefore be necessary to stockpile and mix materials to ensure that the quality of the material will comply with the specified requirements for a particular layer for which it will be used. The cost for these processes shall be deemed to be covered by the rates for the various items of work for which these materials are used.

**PS 3206 CONTROLLING THE MOISTURE CONTENT OF MATERIALS**

**✓ *Add the following to the third paragraph:***

The time required for doing work to accelerate the drying out of wet material or for dealing with wet material as described above, shall not be regarded as part of a delay caused by inclement weather in terms of clause PS 1215.

**SECTION 3300      MASS EARTHWORKS****PS3301      SCOPE**

✓ **Add the following to Clause 3301:**

This section also covers the excavation of material in the river channel near drainage structures, so that easy flow of water is maintained so that drainage structures and embankments are protected from erosion and/or undermining. It also includes the removal of flood deposited material at crossings to restore openings of bridges and culverts so that overflowing is controlled.

The scope shall also include maintenance activities of earth roads.

**PS3305      TREATING THE ROADBED****(a) Removing unsuitable material**

✓ **Add the following to the first paragraph of this sub-clause:**

Roadbed material within 1.0 m of the finished road level shall have a minimum CBR of 3 at 90% of modified AASHTO density, after compaction. Any material which does not meet this requirement shall be treated as unsuitable and removed.

**PS 3312      MEASUREMENT AND PAYMENT**

Delete in pay – items 33.01, 33.02, 33.04 and 33.07 the wording “including free – haul up to 0.5 km” and replace with: “including unlimited free – haul distance”.

✓ **Replace pay Item 33.01, Cut and borrow to fill (a) and (b) with the following:**

Item	Unit
PS 33.01      Cut and borrow to fill including unlimited freehaul distance	
(a)      Gravel or soft material in compacted layer thicknesses of 300 mm and less	
(h)      compacted to 90% modified AASHTO      .....cubic metre	
density	
(ii)      compacted to 93% modified AASHTO      .....cubic metre	
density	

✓ **Replace pay Item 33.07, Removal of unsuitable material (a) and (b) with the following:**

**PS 33.07      Removal of unsuitable material :.....m<sup>3</sup>**

The unit of measurement shall be the cubic metre of unsuitable material removed by the contractor in accordance with the Engineer's instructions irrespective of layer thicknesses and stability of the material. The tendered rate shall include unlimited free haul distances.



✓ **Add the following new pay items**

**PS 33.14 River Training:.....m<sup>3</sup>**

River training shall be paid per cubic metre of material removed. The rate shall include the operation of excavation plant, removal and transportation to spoil of excavated material. The repair and maintenance of the drainage structures shall be covered elsewhere in appropriate items

**PS 33.15 Spot Repair of Earth Roads:.....m<sup>3</sup>**

The works comprise repairing scattered or isolated potholes, depressions, eroded areas or corrugations in an earth carriageway by placing, levelling and compacting local borrow material using hand labour and tools. The objective is to restore a smooth, stable riding surface, proper crown and to prevent water from ponding.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected material, accepted in place after compaction. Physical measurements of length, breadth and average thickness of the trimmed, excavated, hole shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 33.16 Grading Earth Roads (Equipment Based):.....Km**

The works comprise grading earth roadway surfaces and defining of side drains including buttering of the back slope using a motor grader, without adding material from borrow areas or widening, to restore proper crown, cross fall, drainage and an even riding surface.

The works shall be measured in kilometres (Km) of full width of road graded (side drains inclusive). Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS33.17 (a) Reshaping Earth Roads without watering and compaction (Labour Based): ..... Km**

The works shall comprise initial filling of potholes and erosion gullies with fill material from the road reserve or side drains followed by continuous reshaping (drain to drain) and cambering of the carriageway using hand tools and labour thereby restoring proper crown, crossfall, drainage and an even riding surface of the road.

The works shall be measured in kilometres (km) of full width of road reshaped (side drains inclusive). Payment shall include all described reshaping works within the carriageway boundaries. Mitre drains shall be paid separately under their appropriate item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, hand tools, handling, labour, materials and all incidentals necessary to complete the work as specified.

**33.17 (b) Reshaping Earth Roads with watering and compaction (Labour Based): ..... Km**

The works shall comprise initial filling of potholes and erosion gullies with fill material from the road reserve or side drains followed by continuous reshaping (drain to drain) and cambering of the carriageway using hand tools and labour thereby restoring proper crown, crossfall, drainage and an even riding surface of the road. In terms of measurement and payment, refer to pay item 33.17(a) second paragraph.

**PS 33.18      Rehabilitating Earth Roads:.....Km**

The works comprise scarifying, grading, reshaping, watering, mixing and compacting of the existing road formation of earth roads, including reshaping the side ditches to the cross-section as determined by supervising engineer or as shown in the drawings where available. All soils used in reshaping the road section shall be free of organic or other unsuitable matter.

As there might be no designed profile grade for roadbeds in question, the elevation of the reshaped road surface will be determined by the Engineer according to the amount of material brought in from the adjoining side drains, road reserve and other borrow areas (unlimited free haul) to be incorporated into the existing surface.

The works shall be measured in kilometres (km) of full width of road (side drains inclusive). Payment shall include all described works to the roadway inclusive of scarifying, watering and compaction. Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 33.19      Localised Gravelling of Earth Roads:.....Cubic Metre**

The task comprises the supply and laying of specified selected road wearing course gravel to achieve a uniform layer thickness together with shaping, watering and compaction within localised areas on earth roads.

The works are normally performed when the existing earth road has been eroded or otherwise damaged in a localised section. Mechanical compaction and material watering for moisture control are mandatory. Any necessary improvements / repairs to the road drainage system should be carried out as a separate activity in advance of these regravelling operations.

The works shall be measured in cubic metres of selected road gravel measured in its finally compacted condition. Normal measurements shall be based on specified thickness, instructed width and measured length. Alternatively, if agreed with the Employer's Representative the quantity shall be taken as being 70% of the loose volume of delivered gravel surfacing material measured in the trucks. Full-load measurements must be agreed for each truck in advance of deliveries commencing and will normally be based on number of volumetrically checked shovel buckets. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials, compaction works and all incidentals necessary to complete the work as specified.

## **SECTION 3400      PAVEMENT LAYERS OF GRAVEL MATERIAL**

### **PS3401      SCOPE**

✓ ***Add the following to Clause 3401***

This section also includes shoulders reconstruction, trimming and repair using plant, labour and gravel material when long sections have been damaged. This item covers all the shoulder preparatory and cleaning works, grading, scarifying and filling with gravel or crusher run that qualifies as base material and compacting of shoulders to restore shape and slope for easy flow of water and also for use by vehicles wishing to park off the carriageway.

### **PS3402      MATERIALS**

✓ ***Add the following to (a) General***

The material test results for the available gravel material on the various borrow pits in general showed a high plasticity index (PI). The quantity of gravel material complying to the requirements of the standard specifications is limited.

✓ ***Change Clause 3402 (b) as follows:***

The maximum plasticity index of the natural material for selected layer shall be 25%

✓ ***Change Clause 3402 (c)(ii) as follows:***

The maximum plasticity index of the natural material for sub - base shall be 20%

✓ ***Change Clause 3402 (d)(ii) as follows:***

The maximum plasticity index of the natural material for base shall be 12%

### **PS3403      CONSTRUCTION**

#### **(b)      Placing and compaction**

Shoulders

✓ ***Add the following:***

Shoulders shall be constructed from the same material as the base

✓ ***Add the following sub-clause PS 3403 (g)***

**Shoulder Reconstruction**

The activity consists of reshaping, scarifying, patching and generally building up the level and shape of deformed or eroded shoulders (normally to bitumen surfaced roads) to regain originally designed profiles. The fill material shall be obtained from areas of cut (where suitable) or other approved borrow pits. Deep or localised erosion cuts should be repaired as a separate operation using Item PS25.08. The aim is to provide continuous support to the pavement edge and to allow rainwater falling on the road to uniformly run off the road shoulders without concentrating in channels.

- ✓ **Add the following sub-clause PS 3403 (h)**

### **Shoulder Trimming**

The activity comprises the manual trimming down of high or inadequately sloped shoulders adjacent to roads and the removal of that material to approved dump sites. The operation is intended to remove material that builds up gradually in shoulders and prevents the uniform discharge of water from the road surface into the drainage ditches.

- ✓ **Add the following sub-clause PS 3403 (i)**

### **Shoulder Repair**

Where the shoulders to a paved road have been damaged such that potholes, gullies, vehicle ruts, excessive drop, corrugations have formed, they shall be repaired using hand labour, tools and local borrow. The repair shall be such that the shoulder is well trimmed, filled and sloped to approximately 4% ~ 6% so that there shall be no ponding of water and drivers do not hesitate to park on it.

## **PS3407 MEASUREMENT AND PAYMENT**

- ✓ **Change pay item 34.01 as follows:**

Delete the wording “including free – haul up to 1.0 km” and replace with “including unlimited free – haul distance”.

- ✓ **Delete the second paragraph (payment paragraph) of item 34.01 and substitute with the following:**

The tendered rates shall include full compensation for mixing, watering, placing and compacting the material supplied under item PS34.01, and the protection and maintenance of the layer and the conducting of control tests, all as specified.

- ✓ **Add the following new pay items**

### **PS 34.05 Shoulder Reconstruction:.....m<sup>3</sup>**

Gravel shoulder compacted to 98% of modified AASHTO density with minimum thickness of 150mm

The works shall be measured in cubic metres of selected material accepted in the road shoulder measured after compaction. Physical measurements of length, width and average thickness shall be recorded. Where agreed in advance with the Employer's Representative, equivalent compacted volume may be estimated by the application of a compaction factor (typically 70%) applied to the loose delivered volume of material. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.06 (i) Shoulder Trimming (Manual):.....km**

**PS 34.06 (ii) Shoulder Trimming (Mechanical):.....km**

The works shall be measured in metres (m) of road shoulder measured separately on each side of the road. This shall include the complete removal and disposal of trimmed materials including haulage off-site. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.07 Shoulder Spot Repairs:.....m<sup>3</sup>**

The rate of payment shall be per cubic metre of material placed from borrow. This rate shall cover the preparation of the shoulder surface for patching, the excavation and transport of local borrow, placing, levelling, and compacting. It shall also cover for the provision of labour, tools, road signs and safety devices.

**PS 34.08 Access Ramp to Adjoining Property:.....m<sup>3</sup>**

The unit of measure shall be cubic metre. The unit price paid per ramp shall be full compensation for all work required in connection with constructing the ramp, including the furnishing of all necessary labour, materials and incidentals.

**PS 34.09 Spot Repair of Gravel Roads:.....m<sup>3</sup>**

The task involves the hand repair of potholes, ruts, soft-spots and erosion gullies in gravel roads using selected material. It is intended for isolated repairs required between scheduled maintenance and localised repairs to very lightly trafficked road segments. The task is not suitable for the repair of corrugations or where the frequency of pot-holes is high.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected material, accepted in place after compaction. Physical measurements of length, breadth and average thickness of the trimmed, excavated, hole shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.10 Grading Gravel Roads:.....Km**

The task comprises the mechanical grading of gravel roads and their shoulders to restore a smooth riding surface. It is trimming aimed at controlling surface roughness by removal of loose material and corrugations. The operation will not remove severe irregularities nor will it significantly restore camber. It does not involve mechanical compaction. Loose material is removed from the road surface and windrowed along the edge of the carriageway (in the dry season) or recovered across the road (in the wet season).

The works shall be measured in kilometres (km) of full width road graded. This shall include shoulders and side drains. Mitre drains shall be paid separately under their applicable Item 21.01. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.11      Rehabilitating Gravel Roads:.....Km**

The works comprise ripping, scarifying, grading, reshaping, watering, mixing and compacting of the existing road formation of gravel roads, including reshaping the side ditches to the cross-section as determined by supervising engineer or as shown in the drawings where available. All soils used in reshaping the road section shall be free of organic or other unsuitable matter.

As there might be no designed profile grade for roadbeds in question, the elevation of the reshaped road surface will be determined by the Engineer according to the amount of material brought in from the adjoining side drains or road reserve and incorporated into the existing surface.

The works shall be measured in kilometres (km) of full width of road (side drains inclusive). Payment shall include all described works to the roadway inclusive of scarifying, watering and compaction. Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.12      Localised Gravelling of Gravel Roads:.....Cubic Metre**

The task comprises the supply and laying of specified selected road wearing course gravel to achieve a uniform layer thickness together with shaping, watering and compaction within localised areas on gravel roads.

The works are normally performed when the existing road pavement has developed insufficient thickness following several years of trafficking or has been eroded or otherwise damaged in a localised section.

Mechanical compaction and material watering for moisture control are mandatory. Any necessary improvements / repairs to the road drainage system should be carried out as a separate activity in advance of these regravelling operations.

The works shall be measured in cubic metres of selected road gravel measured in its finally compacted condition. Normal measurements shall be based on specified thickness, instructed width and measured length. Alternatively, if agreed with the Employer's Representative the quantity shall be taken as being 70% of the loose volume of delivered gravel surfacing material measured in the trucks. Full-load measurements must be agreed for each truck in advance of deliveries commencing and will normally be based on number of volumetrically checked shovel buckets. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials, compaction works and all incidentals necessary to complete the work as specified.

**SERIES 4000      ASPHALT PAVEMENTS AND SEALS**

**SECTION 4100      PRIME COAT**

**PS 4102      MATERIALS**

**(a)      Priming material**

✓ **Add the following:**

The prime coat shall either be MC 30 or MC 70 cut-back bitumen. The nominal rate of application for tender purposes shall be 0.7 litre/m<sup>2</sup>.

**SECTION 4300      MATERIALS AND GENERAL REQUIREMENTS FOR SEALS**

**PS 4303:      Plant and Equipment**

**(a)      General**

**Add the following:**

The Contractor shall ensure that he has a very good competent surfacing team, which is capable of delivering a high quality standard of workmanship; i.e. Competent and experienced Asphalt Foreman, operators and attendants, who have abilities of carrying out binder distribution and seal work operations within specified tolerance of applications and according to final product requirements.

The Engineer will instruct the removal of incompetent staff from site and a replacement thereof with a competent staff if satisfactory performance is not achieved and maintained.

**(b)      Binder distributor**

**Add the following:**

The binder distributor shall be capable of spraying the binder to the specified application rates and to the satisfaction of the Engineer. It is important that the pump of the distributor shall be capable of delivering the binder at the spray bar nozzles at the correct pressure to obtain the specified application rates, irrespective of the viscosity properties of the proposed binder. The spray bar of the distributor shall be fitted with fishplates at the outside edge of the bar to prevent over spraying onto shoulders or staining of concrete elements on the edge of the surfacing of the road. If instructed by the Engineer, the outside nozzles of the spray bar shall be turned to a 45° angle to achieve a thickened edge of binder along the outside limits of the seal area.

The variation in the rate of application between two adjoining 100 mm strips shall not exceed 5%, excluding the outside 300 mm on either side of the spray bar. The coefficient of the variation shall not exceed 10%. The test procedure shall be as prescribed in the Modified Tray-test contained in TRH 3 and shall be carried out each time the distributor is established on site or at least once per week. The binder distributor shall thus carry a set of troughs at all times in order to allow the execution of this test.



A calibration certificate, not older than 3 months, for the binder distributor shall be presented to the Engineer in order to ensure accurate application rates.

The binder distributor shall be fitted with a suitable valve or other access gate for taking of samples of the binder for testing purposes.

**(c) Chip spreaders**

**Add the following at the end of the first paragraph:**

The chip spreader shall be capable of delivering a proper and uniform transverse distribution of chips across the width of the hopper. The chip distribution shall be tested by means of canvas patches each 1.0 by 1.0m and placed side by side. The mass of chips spread into each individual canvas patch shall not deviate by more than 10% from the calculated average spread per canvas patch "

**Add the following to the last paragraph:**

A non-self propelled chip spreader may only be used in the event of a breakdown of the self-propelled chip spreader and shall be limited to the completion a distributor load. No further application of binder shall be permitted until such time as the self-propelled chip spreader is repaired or replaced.

**At the end of the clause add the following paragraphs:**

It is the Contractor's responsibility to incorporate, service and maintain all the necessary, adequate and sufficient equipment to carry out all his sealing operations. The Contractor may use the same bitumen distributor and heater described in Sub-Clauses 4103(a) and (d).

"The Engineer shall be entitled to instruct the removal, substitution or addition of equipment should there be any doubt as to the efficiency or capability of the equipment provided. No sealing work shall commence or continue if, in the opinion of the Engineer, all the required equipment is not on the site or in good operational condition."

**PS 4304: GENERAL LIMITATION AND REQUIREMENTS**

**(a) Weather limitations**

**(i) Non-homogeneous Modified Binders (summer grade)**

The minimum road surface temperature for applying bitumen-rubber binder shall be 25°C, and if below 25°C, the air temperature shall be at least 20°C and rising. As soon as the minimum air temperature at night is recorded to fall below 10°C, sealwork shall cease until warmer weather conditions are experienced.

Application of binders shall not be allowed if the existing cracks in the road contain moisture after rain.

**(d) Preparation of areas to be sealed****(ii) Newly constructed seals**

For the repair and filling of uneven spots in the completed base shallower than 12mm, a slurry complying with the requirements of clause 4604 (c) shall be used, based on one of the gradings of a Fine slurry.

60% stable mix-grade emulsion prepared from 70/80 penetration grade bitumen shall be used as binder.

The mix of fine aggregate, which shall be used for repairs shall comply with the following requirements by volume in the case of the irregularities exceeding 12mm in depth:

9.5mm nominal sized aggregate	1 part
6.7mm nominal sized aggregate	1 part
Fine –graded crusher sand	1 part

Each patch shall be compacted by means of two passes of a steel-wheeled roller of minimum mass of one comma five (1.5) tons, which compaction must be applied within four (4) hours after the emulsion has broken.

**(iii) Existing Surfaces to be resealed**

If so instructed the Contactor shall seal wide cracks by hand-application of Petrol seal. Payment will be made at daywork rates. Localised undulations shall be repaired as for base corrections, where and if so instructed, also on Dayworks rates.

Except at the intersections, the existing surfacing shall be cut back to a width of 7.4m with a roller cutting blade attached to a heavy self-propelled roller. The redundant surfacing strips shall be removed and edge break repairs shall be carried out before completion of the reconstruction of the shoulders, where such reconstruction is instructed.

Three (3) weeks prior to commencements of resealing operations an MSP 3 inverted emulsion rejuvenator shall be applied over the full width of the narrowed existing road seal, plus 100mm to 300mm wider along each side. The MSP 3 rejuvenator spray, shall be applied in half widths at an application rate of 0.5 l/m<sup>2</sup> during the summer months, before the start of the rains and the sprayed section kept closed to traffic for at least five (5) hours before re-opening.

**PS 4305: HEATING AND STORAGE OF BITUMINOUS BINDERS****(b) Non- homogenous (heterogeneous) modified binders (summer grade)**

Bitumen rubber binder shall not be stored at all. Once the rubber is added to the base bitumen, the product shall be applied to the road as soon as it is adequately digested and at spraying temperature. Any binder left in the distributor at the end of the allowable spraying period, or not applied due to an unforeseen stoppage lasting till beyond the spraying period, shall be removed from site. Even a forced stoppage in the blending period between addition of the rubber and heating to spraying temperature shall not be considered as a reason for the approval of storing the binder for later use. Reference shall be made to the specified limitations regarding the programme of work and lengths of construction areas described in section 1200 and 1500 of these specifications.

The Engineer's supervisory staff shall, through timeous notification by the Contractor, be afforded the opportunity to attend to all bitumen rubber blending operations in order to exercise control sampling and testing on the binder from the stage just prior to the addition of the rubber to the base bitumen up to the end of the allowable spraying period. Failure to conform to the requirements will be considered reason enough by the Engineer to reject the batch of binder.

**PS 4310: Dust Control**

Delete paragraph two.

**SECTION 4900 TREATMENT OF SURFACE DEFECTS, PATCHING, REPAIRING  
EDGE BREAKS, CRACK SEALING**

**PS4911 MEASUREMENT AND PAYMENT**

✓ ***Change pay items 49.09 (a) and (b) as follows:***

The tendered rate for backfilling of excavations for patching shall be applicable to any damaged area irrespective of the size.

✓ ***Add the following additional pay items:***

**PS 49.09 Backfilling of excavations for patching with:**

(c) Gravel material.....Cubic Metre

This task is normally performed in conjunction with bitumen surfacing repairs where the depth of potholes or other failure areas, extend significantly within lower unbound pavement layers. It is also used where the cause of surfacing failure is the deformation of the unbound layers or road foundation. Reconstruction of the unbound layers under this item is made using natural gravel base material compacted mechanically.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected natural gravel base material after compaction. Physical measurements of length, width and average thickness shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above irrespective of the size of the damaged areas including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

(d) Crushed Stone Aggregate.....Cubic Metre<sup>-</sup>

This task is normally performed in conjunction with bitumen surfacing repairs where the depth of potholes or other failure areas, extend significantly within lower unbound pavement layers. It is also used where the cause of surfacing failure is the deformation of the unbound layers or road foundation. Reconstruction of the unbound layers under this item is made using crushed stone aggregate compacted mechanically.

The works shall be measured in cubic metres (m<sup>3</sup>) of crushed stone aggregate after compaction. Physical measurements of length, width and average thickness shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above irrespective of the size of the damaged areas including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified

**PS 49.16 Rip, scarify, water, mix and re-compact existing base.....Square Metre**

- (a) 95% of modified AASHTO density (specify compaction thickness layer)...
- (b) 98% of modified AASHTO density (specify compaction thickness layer)

Work under this item involves ripping of existing surfacing that is heavily potholed. The old surfacing material shall be disposed of away from the site. The remaining surface shall be scarified, watered, mixed and compacted to the specified density.

Payment shall be made per square metre of surface compacted, and shall be compensation for cost of using grader, water bowser, and roller. Where top up gravel is required, this shall be paid under item PS 49.09(c).

**PS 49.17 Milling, water, mix and re-compact existing road pavement layers.....Square Metre**

- (a) 95% of modified AASHTO density (specify compaction thickness layer)
- (b) 98% of modified AASHTO density (specify compaction thickness layer)

Work under this item involves milling of the existing road pavement layers to a depth of up to 200mm, watering, mixing, shaping to levels and compaction to the specified density. All the necessary preparations prior to the milling exercise such as cleaning and removal of debris, loose soil and deleterious material shall also form part of this work item.

Payment shall be made per square metre of surface milled, and shall be compensation for providing milling equipment, grader, water bowser and roller. Where top up gravel is required, this shall be paid under item PS 49.09(c).

**PS 49.18 Pothole Repair:**

(a) With stabilised base material:

The stabilizing agent to be used on this project, shall be cement or lime as instructed by the Engineer. Optimum quantities of stabilizing agent shall be determined by laboratory tests on site during construction.

(i) Base material stabilised with cement .....square metre

(ii) Base material stabilised with bituminous emulsion .....square metre

The works comprise the permanent repair of existing potholes in paved roads, using stabilised aggregate base materials. The works shall include cutting of the edges, excavation of loose material, priming of edges, placement and compaction of stabilised base materials up to a depth of 200mm in terms of base preparation where necessary.

The material shall comply with the following requirements specified for the various types of materials in the appropriate sections of the specifications.

The works shall be measured in square metres of completed repair of any thickness up to a depth of 200mm. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

Where the repair shall be covered with a slurry seal, this shall be carried out and measured as a separate pay item.

(b) With cold mix asphalt material:

(i) 25 mm thickness.....square metre

(ii) 40 mm thickness.....square metre

The works comprise the repair of existing potholes in paved roads using cold mix asphalt material. The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary (except where crushed stone is instructed by the Engineer, payment shall be under item PS49.09(d)), handling, labour, materials and all incidentals necessary to complete the work as specified. Surfacing is made using cold premix asphalt manufactured to recipe using a pug-mill or concrete mixer and mechanically compacted to achieve a smooth, even road surface.

The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth (except where crushed stone is instructed by the Engineer, payment shall be under item PS49.09(d)), handling, labour, materials and all incidentals necessary to complete the work as specified.

- (c) With plant mix hot asphalt:
- (i) 25 mm thickness.....square metre
  - (ii) 40 mm thickness.....square metre

The work comprises the permanent repair of isolated potholes (up to 200mm in depth in terms of base preparation) that have formed in the surface of an asphalt or surface dressed pavement.

The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary. Surfacing is made using hot-mix asphalt produced at a central batching plant to an approved recipe.

Hot-mix Asphalt shall be a Continuously Graded (Medium) asphalt surfacing using 70/100 penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (2001) Clauses 4202 and 4203.

Prime coat to unbound bases shall be 60% stable grade anionic bitumen emulsion (diluted with up to 3 parts of water to 1 part emulsion, depending on the porosity of the base material).

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion or heated penetration grade bitumen. Cut-back bitumen may be used with the prior consent of the Employer.

The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth, handling, labour, materials and all incidentals necessary to complete the work as specified.

- (d) With site mix asphalt:
- (i) 25 mm thickness.....square metre
  - (ii) 40 mm thickness.....square metre

The work comprises the permanent repair of existing potholes in paved roads using site prepared hot mix asphalt produced to an approved recipe. The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary. This repair option should only be used where small work quantities are required or where central batching plants are not available. To ensure the proper performance of the completed repair, the asphalt is required to be placed and compacted in accordance with the Specifications in Section 4200.

Site mixed Asphalt shall be a Continuously Graded (Medium) asphalt surfacing made using 70/100 penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (1998) Clauses 4202 and 4203. In certain situations the Employer may permit the use of standard recipe mix designs or alternative approved specifications, but only where sufficient test data and records of field performance confirm suitability.

Prime coat to unbound layers shall be 60% stable grade anionic bitumen emulsion (diluted with up to 3 parts of water to 1 part emulsion depending on the porosity of the base material).

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion, or heated penetration grade bitumen. Where required to the floor of potholes that do not extend below the existing asphalt, tack coat shall be diluted 2 parts of water to 1 part emulsion. Cut-back bitumen may be used with the prior consent of the Employer in which case small quantities may be prepared by blending kerosene and bitumen using strict fire precautions on site.

The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth, handling, labour, materials and all incidentals necessary to complete the work as specified.

## **PS 4912      SPEED CALMING MEASURES**

### **PS 49.19      Rumble Strips**

Rumble Strips as per standard drawing (Set of 5No. Across the road width: 150mm width x 15mm high at 500mm centre to centre)

### **PS 49.20      Speed Humps**

Speed Humps as per standard drawing (9.5m long x 100mm high across the road width)

#### **Add the following clause:**

**As part of speed calming measures, Rumble Strips and Speed Humps shall be constructed with the following specifications:**

#### **(a) Rumble Strips**

Rumble Strips shall extend across the full width of the carriageway.

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion or heated penetration grade bitumen. Cut-back bitumen may be used with the prior consent of the Employer.

Hot-mix Asphalt shall be a Continuously Graded (Medium) asphalt surfacing using 70/100 penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (2001) Clauses 4202

and 4203.

**(a) Speed Hump/Raised Pedestrian Crossing**

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion or heated penetration grade bitumen. Cut-back bitumen may be used with the prior consent of the Employer.

Hot-mix Asphalt shall be a Continuously Graded (Medium) asphalt surfacing using 70/100 penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (2001) Clauses 4202 and 4203.

Refer to the standard drawing

**PS 4912 MEASUREMENT AND PAYMENT**

**PS 49.19 Rumble Strips.....No**

The work for payment shall be measured as number. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the area inclusive of handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 49.20 Speed Humps.....No**

The work for payment shall be measured as number. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the area inclusive of handling, labour, materials and all incidentals necessary to complete the work as specified.



## **5000 ANCILLARY ROAD WORKS**

***Add the following new section:***

### **SECTION PS5050: BUS BAYS**

#### **PS 5051 Scope**

Bus Bays will be located on site as instructed by the Engineer. Where Bus Bays are situated on opposite side of the road they shall be located such that the entry tapers follow each other and not the exit tapers that shall be remote from each other.

The Bus Bay shall be constructed as detailed in the drawings. The construction works shall include the following items:

- Gravel base on top of separately prepared sub base and earthworks
- Kerb stone type S1 including backing with concrete
- Concrete for bus bay 200 mm Class 20/19 with shrinkage joints and brushed surface finish
- Steel fabric reinforcement – size A252 in concrete
- Joints and sealant
- Finishes
- Drainage outlets through kerbs and verge
- Fill for side walk behind kerb stones

#### **PS 5052 MEASUREMENT AND PAYMENT**

Payment for Bus Bays item shall be made as comprising of all the activities mentioned under PS 5051 above, for the number of Bus Bays as instructed by the Engineer.

Excavation and fill below the sub base will be measured and paid under separate measured items.

The following pay items are applicable:

**PS 50.01: Bus Bays: Construct Bus Bays as per typical bus bay drawing**

(a)	Subbase 95% modified AASHTO in layers of 200mm.....	m <sup>3</sup>
(b)	Base to 98% modified AASHTO in layers of 200mm.....	m <sup>3</sup>
(c)	20/19 concrete pavement 200mm thick.....	m <sup>3</sup>
(d)	Steel fabric reinforcement – type A252.....	kg
(e)	Kerb stone Type S1 including backing with concrete.....	m
(f)	Drainage outlet.....	No.

**SECTION 5100 MARKER AND KILOMETRE POSTS**

**PS 5101 SCOPE**

*Add the following to this Clause:*

Road reserve demarcation beacons shall be constructed according to details on the drawings at an interval of 200m on either side of the road.

**PS 5106 MEASUREMENT AND PAYMENT**

✓ *Add the following pay item:*

Item	Unit
<b>PS 51.03 Road reserve demarcation beacons .....</b>	<b>No.</b>

The unit of measurement shall be the number of beacons installed to the satisfaction of the Engineer

The tendered rate shall include full compensation for excavation, materials, reinforced concrete and backfilling of the beacon. Refer to standard drawing.

**SECTION 5200: GUARDRAILS**

**PS 5202 MATERIALS**

**5202(b) Guardrail posts**

Add the following:

- (iii) Concrete posts

Guardrail posts shall be of prefabricated concrete according to the detail on the drawings. Timber spacer blocks shall comply with specifications of Clause 5202.

## **PS 5203 CONSTRUCTION**

### **5203(a) Erection**

Add the following to the 3rd paragraph:

The bolts shall be tack welded to the nuts in order to reduce the risk of vandalism.

## **PS 5206 MEASUREMENT AND PAYMENT**

Add the following pay item:

<b>Item</b>	<b>Unit</b>
PS52.13 Galvanised and painted guardrails on concrete posts including end units and reflective posts .....	metre (m)

The unit of measurement shall be the metre of guardrail erected including end units.

The tendered rate shall include full compensation for furnishing all materials and labour and for erecting the galvanized guardrails painted as specified on the drawings or as directed by the Engineer, complete with prefabricated concrete posts, spacer blocks, bolts, nuts, washers and reinforcing plates, bull noses and for excavating and backfilling post holes with 15Mpa concrete and/or selected excavated material and removing surplus excavated material.

## **SECTION 5400 ROAD SIGNS**

### **PS 5401 SCOPE**

***Add the following to this Clause:***

This section also covers the repair of permanent road traffic signs. It includes the repair and replacement of faded, damaged or not clearly visible existing signboards and reference marker boards.

This section also covers the cleaning of existing permanent road signs which faces appear dirty, faded or non-reflective as well as the removal of illegal signs.

## **5406 ERECTING ROAD SIGNS**

*Change the heading of this Clause as follows:*

### **PS 5406 ERECTING, REPAIRING AND CLEANING OF ROAD SIGNS**

*Add the following Sub-Clauses:*

#### **PS 5406 (h) – Repair Work**

The Engineer may require that certain existing signs be dismantled for repair work or storage and later re-erected. The signs shall be repainted or repaired, by replacing the 200mm profiles or straightening the sheet metal, in accordance with the methods and requirements specified during the manufacturing process. New materials shall be used for part or all of the supporting structure. This work shall be done with as little damage as possible to the signs.

#### **PS 5406 (i) – Cleaning of Road Signs**

##### **(i) Cleaning**

The Engineer shall indicate which signs are to be cleaned.

Sign faces shall be cleaned using a non-abrasive cleaner with a pH of 6 to 8. Approved sign cleaning equipment such as the “Highway Handyman” cleaner shall be used.

All loose dirt and cleaners shall be washed from the sign. High pressure spray on the signs shall be avoided.

To reach the large overhead signs for cleaning, the Contractor shall use a truck with a hydraulic lift and shall take all necessary precautions not to damage the road surface when positioning the truck.

On instruction from the Engineer the Contractor shall remove dirt and graffiti from road sign faces.

##### **(ii) Painting of metal road sign elements**

Metal road sign supports and frames of sign faces which are showing a degree of corrosion, shall be repainted with the same type of paint used during the initial manufacturing of the sign elements. All corroded parts to be repainted shall first be properly cleaned using wire brushes, sanding paper, or other effective cleaning apparatus, to such an extent that no trace of rust can be observed all to the satisfaction of the Engineer.

##### **Illegal signs: removal**

Only on the instruction of the Engineer shall illegal signs be removed and disposed off or stored if required. Any inquiries from outside parties regarding the removal of illegal road signs shall be directed to the Engineer.

**PS 5409 MEASUREMENT AND PAYMENT**

**Create the following new Pay Item:**

**PS 54.10 Road Signs (Complete).....No.**

Measurement items 54.01, 54.02 and 54.03 are combined into one item PS54.10 and measurement shall be in terms of number of road signs installed and approved. A schedule of road signs to be installed will be provided on drawings detailing type, location for installation, dimensions, fixing and installation details, etc.

The road signs shall be of Class 1 – Engineering grade and lettering, symbols and border of retro-reflective material of High-intensity grade.

Under Item 54.10 the tendered rate shall also include the full compensation for provision and installation of the road signs (including excavation in soft material or rock, concrete backfill, road sign steel tubing supports, bolts and other accessories, welding, lettering etc.) according to drawings and specifications.

**PS 54.11 Repair of Road Traffic Signs.....No.**

The unit of measurement shall be the number of repaired road traffic signs.

The tendered rates shall include full compensation for dismantling of the damaged traffic sign and its support, repairing the road signboard and re-fixing it to the road sign support structure. The tendered rate shall also include the cost for all equipment, labour, supervision, nuts, bolts, transport, handling, *inter alia* necessary for the installation of the road signboard.

**PS 54.12 Repair of Road Sign Supports.....No.**

The unit of measurement for erecting supporting structures manufactured from steel tubing shall be the number of repaired steel tubing used. Bolts and other accessories shall not be measured separately.

The tendered rates shall include full compensation for erecting the road sign supports, including all bolts, screws, rivets, welding and accessories, together with the painting and galvanising required and the provision and treatment of breakaway holes in timber supports.

The tendered rate shall include full compensation for all the labour, excavation, backfilling with soil or concrete, *inter alia*, as may be necessary for completing the work in accordance with the details shown on the drawings.

**PS 54.13 Road Sign Cleaning:**

- (a) Cleaning of guard-rail reflectors (all types).....No. —
- (b) Cleaning of road signs boards from any dirt as well as from graffiti.....No.

The unit of measurement shall be the number of guard-rail reflectors and road signs cleaned.

The tendered rates shall include full compensation for all labour, material and equipment necessary for cleaning the road signs from any dirt as well as from graffiti. It shall include for the provision and application of the specified cleaning detergent.

**PS 54.14 Painting of metal road sign elements:**

- (a) Road sign supports or frames .....litre (l)
- (b) Road sign boards .....litre (l)

The unit of measurement shall be the litre of road sign paint as per manufacturer's specifications.

The tendered rate shall include full compensation for the supply and application of one coat of the specified paint to sign supports and frames. The tendered rate shall also include for the cleaning and preparation of the elements, as specified, before the application of the paint.

**PS 54.15 Removal of Illegal signs.....No.**

The unit of measurement shall be the number of illegal road signs of any size removed on instruction of the Engineer.

The tendered rate shall include full compensation for all labour, equipment, transport and overheads necessary for removal of the illegal signs.

**SECTION 5500 ROAD MARKINGS****PS 5502 MATERIALS****5502(a) Paint****(ii) Retro-reflective road marking paint**

Road marking paint shall comply with the requirements of SABS 731-1 for type 1 paint

During actual painting the Contractor must supply sealed samples of the paint to be used to the Engineer together with details of the paint batch numbers and testing carried out on these particular batches by the paint manufacturer to prove compliance with this specification. These samples shall be kept until the end of the period of maintenance.

**5502(b) Road studs**

**Delete the first paragraph of the sub clause and substitute with the following:**

Road studs shall consist of an acrylic plastic shell filled with a tightly adherent potting compound. The shell shall contain two prismatic retro-reflective faces to reflect incident light from opposite directions. The colour shall conform to the colour requirements of ASTM D4280.

The shell shall be moulded of methyl methacrylate conforming to ASTM D788 Grade 8. The outer surface of the shell shall be smooth. The base of the marker shall be substantially free from gloss and substances that may reduce its bond to adhesive.

The filler shall be a potting compound capable of supporting a minimum load of 909 kg when tested in accordance with ASTM D4280.

The size, colour and spacing of road studs shall be as indicated on the Drawings or directed by the Engineer.

**PS 5504 MECHANICAL EQUIPMENT FOR PAINTING**

**Insert the following additional paragraph after the first paragraph:**

Equipment for thermoplastic marking shall consist of at least one truck mounted storage boiler, a screed box on wheels and an extruder or spraying machine. A steel manual screed shall be used to paint arrows and other symbols. The extruder may be truck-mounted or self-propelled. Boilers must be fitted with mechanical stirrers to keep the mineral matter and glass beads in suspension. Accurate thermometers and thermostats are required on all boilers.

## **PS 5507 APPLYING THE PAINT**

### **Add the following at the end of the third paragraph:**

The thickness of thermoplastic laid in the trial and for each day's work shall be checked by applying the material to a clean steel plate. The plate sample shall be taken while marking is in progress by positioning the plate on the road in the projection of the line which is about to be marked. The thickness shall then be confirmed with callipers. Gaps left within the road markings due to testing shall be immediately reinstated.

### **Add the following to end of the last but one paragraph:**

The rate of application of thermoplastic road paint shall be related to volume and be that amount sufficient to achieve the specified nominal line thickness.

### **Add the following to the last paragraph:**

After completion of a section of asphalt surfacing and before opening the section to traffic, the pre-marking of the centre and edge lines shall be done. At least two weeks shall elapse after completion of the surfacing before the permanent road markings shall be applied, unless otherwise directed by the Engineer.

## **PS 5508 APPLYING THE RETRO-REFLECTIVE BEADS**

### **Add the following to the end of the first paragraph:**

In the case of thermoplastic paint, the rate of application of beads shall be 0.5kg/m<sup>2</sup> of marking. This amount shall be in addition to the quantity already mixed within the composition of the thermoplastic.

## **PS 5514 MEASUREMENT AND PAYMENT**

Delete pay item 55.04: Variation in the rate of paint application.

The Contractor shall be deemed to have included the cost of this item in the rates tendered for road marking.



## **SECTION 5700 LANDSCAPING, TOPSOILING AND GRASSING**

### **PS 5702: Materials**

Add the following to the relevant sub-clauses:

#### **(a) Fertiliser/Soil-Improvement Material**

Fertilisers shall not be used in this Contract.

#### **(b) Grass Cuttings**

Grass cuttings shall be fresh cuttings of the species as specified by the Engineer

#### **(c) Grass Seeds**

The Contractor may use grass seeding in lieu of planting, but no additional payment shall be made for hand seeding or hydroseeding.

#### **(d) Trees, Shrubs and Hedge Plants**

This sub-clause is deleted.

#### **(e) Grass Sods**

Delete this sub-clause and replace it with the following:

Veld sods may be obtained from approved areas where a suitable type and density of grass are found. No additional payment shall be made for sods.

#### **(f) Anti-Erosion Compounds**

This sub-clause is deleted.

#### **(g) Topsoil**

Delete paragraphs two, three and four, and replace them with the following:

Topsoil shall be obtained from stripping operations under embankments and in cuttings in accordance with Sub-Clauses 1702(c) and 1703(a). Topsoil stripped from borrow areas shall not be used for topsoiling elsewhere but must be used to rehabilitate the borrow areas themselves. If the Contractor fails to conserve the topsoil as prescribed in Sub-Clause 1702(c) he shall obtain suitable topsoil from other sources at his own cost.

Care shall be taken to prevent the compaction of the topsoil in stockpiles or in the Works in any way, particularly by trucks driven over such material.

**PS 5704: Preparing Areas for Grassing**

**(a) Soil Ripping**

This sub-clause is deleted.

**(b) Areas Which Do Not Require Topsoil**

This sub-clause is deleted.

**(c) Areas Which Require Topsoil**

Add the following to this sub-clause:

All surfaces to be grassed shall immediately before grassing be roughened to ensure a proper bond with the topsoil. Topsoil free from stones shall be placed on the prepared surface and trimmed to a thickness slightly higher than the final thickness.

Where shown on the Drawings or directed by the Engineer the verges and the slopes of cuttings and embankments shall be covered with topsoil and lightly rolled to the required final thickness.

**(d) Fertilising**

This sub-clause is deleted.

**PS 5705 Grassing**

The Contractor shall choose the method of establishing grass. No additional payment shall be made regardless of the method of grassing employed by the Contractor.

Add the following to this sub-clause:

**(a) Planting Grass Cuttings**

Fresh grass cuttings of the “Kapinga” species or other approved species shall be planted by the Contractor at 250 mm centres and watered at frequent intervals to ensure the grass takes root and spreads out quickly. Grass cuttings that have been allowed to dry out shall not be planted.

Add the following to this sub-clause:

**(c) Hydroseeding**

The Engineer shall approve the types and mixtures of seeds to be used before the Contractor orders any seed. Hydroseeding shall be carried out with an approved hydroseeding machine at a rate of application of not less than 38 kg of seed mixture per hectare. A mulch shall be added to the hydroseeding mix at an approved rate.

**(d) Topsoiling Only**

This sub-clause is deleted.

Add the following to this sub-clause:

**(e) Grassing With an Approved Grass Planter**

Grassing shall be done with an approved grass planter which plants the seeds in rows spaced not more than 250 mm apart. The planter shall plant the seeds approximately 6 mm deep and shall lightly compact the topsoil.

**(g) Other Methods**

This sub-clause is deleted.

**(h) The Grassing of Borrow Pits, Temporary Bypasses, Camp Sites, Access Roads and Stockpile Sites**

This sub-clause is deleted.

**PS 5706: Maintaining the Grass**

**(a) Watering, Weeding, Mowing and Replanting**

On line one of paragraph two delete “mow” and replace with “cut”.

**(b) Acceptable Cover**

At the beginning of this sub-clause add the following as first paragraph:

The Contractor shall be solely responsible for establishing an acceptable grass cover and for the cost of re-establishing grass by any method where no acceptable cover has been established.

**(c) Defects Liability Period**

The Defects Liability Period in respect of grass shall commence when an acceptable grass cover as defined in (b) above has been established and shall last one year or to the end of the period of the Contract, whichever expires later.

The Contractor shall be responsible for watering, cutting and maintenance of all grassed areas during the period of maintenance.

**(d) Proprietary Brand Materials Used for Erosion Prevention**

This sub-clause is deleted.

**(e) Responsibility for Establishing an Acceptable Cover**

This sub-clause is deleted. Sub-Clause 5706(b) applies.

**(f) Re-Fertilising**

This sub-clause is deleted.

**PS 5709: Measurement and Payment**

Add the following new pay items:

**PS 57.03 (c ) (i):** Preparing the area for grassing, topsoil obtained from within the road reserve or borrow areas (unlimited free haul), layer thickness 75mm.....m<sup>2</sup>

**SERIES 6000: STRUCTURES****Section 6100: Foundations for Structures****6115 Measurement and Payment**

✓ *Change pay items 61.02 and 61.04 as follows:*

Item	Unit
<b>PS 61.02 Excavation:</b>	
(a) Excavation in any material other than rock at any depth .....	m <sup>3</sup>
(b) Excavation in rock at any depth .....	m <sup>3</sup>
<b>PS 61.04 Backfill to Excavations:</b>	
(a) utilizing imported material or material from excavation.....	m <sup>3</sup>
(b) Soil cement .....	m <sup>3</sup>

**Section 6200: Falsework, Formwork and Concrete Finish****6210 Measurement and Payment**

*Change Pay Item 62.01 to read as follows:*

**PS 62.01 Formwork** .....square metre

Formwork to all members, any face (horizontal, vertical or inclined) and for all classes of finish.

***Amend the first paragraph after the first four Pay Items to read as follows:***

The unit of measurement shall be the square metre and only the actual area of formwork in contact with the finished face shall be measured. No separate payment will be made for vertical, horizontal or inclined false work. The rate for formwork shall be for all classes of finish and to any direction.

***Add the following new section:***

**SECTION PS 6900: REPAIR AND MAINTENANCE OF BRIDGES****PS 6900 Scope**

The works comprise the inspection, removal of deteriorated wooden bridge deck members (beams, chasses and running boards), cleaning of the receiving structure and replacing with new members as required and fixing securely in place. In terms of payment, a differentiation is made between timber superstructure bridges, and Bailey Bridges due to the difference in fixings.

The works shall also cover the repair and maintenance of concrete decks parapets, deck slabs and beams.

**PS 6901      Materials**

**(a) Wooden bridge decks**

Timber chassis (cross-member) and running boards - (200 - 250 x 75mm) pine/equivalent soft wood or (200 - 250 x 50mm) hardwood,

Bulk-stripped Blue Gum or any other approved hardwood timber bearers (beams) - (300 – 450 mm dia. to match existing) or

Approved bulk-stripped softwood beams in special cases - (300 – 450 mm dia. to match existing),

Timber packing pieces (preferably hardwood),

150mm galvanised coach screws,

Preservative treatment chemicals.

**(b) Concrete bridge decks**

Concrete

Epoxy

Penetration grade bitumen

**PS 6903      Execution of Works**

**(a) Wooden bridge decks**

- (a) The bridge shall be stripped of rotten or otherwise faulty timbers as directed by the Employer's Representative. The exact extent of the work will be confirmed on site depending on the agreed condition of the exposed timber.
- (b) Faulty timbers shall be replaced with new timbers that generally have the same dimensions as the original, except as otherwise directed by the Employer.
- (c) Discarded timbers shall be disposed of by the Contractor in dumps approved by the Employer's Representative. On no account shall these be burned other than indirectly by logging and donation to local dwellers for cooking fuel, etc.
- (d) All deck timbers shall be square sawn, well seasoned, without warps or twists and free of jagged edges.
- (e) Main bearer beams shall be straight and without splits or cracks and be of uniform size.
- (f) All softwood shall first be given two coats of proprietary preservative paint applied strictly in accordance with the manufacturer's instructions. Any cuts that are subsequently made to the timber shall be similarly treated.
- (g) Chassis timbers (cross-members) shall be fitted with an air gap of not more than 50mm between adjacent planks to allow drainage and prevent dirt from becoming trapped. Where for reason of uneven beams the planks do not sit uniformly, they shall be packed using hardwood packing pieces cut to size. Packing pieces shall be a minimum of 300mm in length. High points on bearers may be locally removed by trimming.

- (h) All timbers shall be fixed using 150mm galvanised coach screws or nuts and bolts. Nails shall not be used unless otherwise approved due to their tendency to work loose. The screws shall be driven in a skewed and staggered manner.
- (i) In the case of Bailey Bridge redecking only proprietary galvanised steel fixings shall be permitted.
- (j) After renewing the deck chassis timbers, new running boards shall be fitted. These shall form a bridge valley (space between the two sets of running boards) of not more than 500mm or shall match the previous configuration. Each set of running surface shall have five planks or 1.1metres width, whichever is greater). All running boards shall be longer than 1.5m in length. Joints between parallel boards shall be staggered.
- (k) On completion of the works, the site shall be cleaned of all surplus materials and waste, and left in a clean, tidy condition.

### **(b) Concrete bridge decks**

Concrete shall be transported and placed in a manner that will prevent segregation or loss of constituent materials or the contamination of the concrete.

Concrete shall not be placed in any part of the works until the Engineer's approval has been given. Placing and compacting the concrete shall at times be under the direct supervision of an experienced concrete supervisor. Concrete shall be fully compacted by vibrators or other approved means during and immediately after placing.

## **PS 6904 Measurement and Payment**

### **PS 69.01 Removal of existing timber bridge decks.....metre**

The unit of measurement shall be the metre of measured timber bridge deck length.

The tendered rate shall include the removal of timber running boards, chassis and beams of an existing timber deck bridge. The tendered rate shall also include the disposal of removed items away from site.

### **PS 69.02 Bailey bridge works (Specify Type of Bailey Bridge and Configuration) eg Standard, Mabey or Extra wide and Single Single, Tripple Single, Double Double etc**

#### **(a) De-launching .....metre**

The unit of measurement shall be the metre of measured bailey bridge length.

The tendered rate shall include the de-launching of entire bridge including preparatory work, required de-launching gear, equipment and labourers.

#### **(b) Re-launching.....metre**

The unit of measurement shall be the metre of measured bailey bridge length.

The tendered rate shall include the re-launching of entire bridge including preparatory work, required launching gear, equipment and labourers.

**(c) Transportation of bailey parts.....tonne-km**

The unit of measurement shall be the tonne of bailey parts to be transported multiplied by the transport distance.

The tendered rate shall include the loading, transport and unloading of bailey parts as instructed by the Project Manager.

**PS 69.03 Renew Bridge Timbers – Standard Chassis**

(a) (200–250) mm x 75 mm Softwood .....metre

(b) (200–250) mm x 50 mm Hardwood .....metre

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

**PS 69.04 Renew Bridge Timbers – Running Boards**

(a) (200–250) mm x 75 mm Softwood .....metre

(b) (200–250) mm x 50 mm Hardwood .....metre

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

**PS 69.05 Renew Bridge Timbers – Bailey Bridge Chassis**

(a) (200–250) mm x 75 mm Softwood .....metre

(b) (200–250) mm x 50 mm Hardwood .....metre

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.



**PS 69.06 Renew Bridge Timbers – Bailey Bridge Running Boards**

(a) (200–250) mm x 75 mm Softwood .....metre

(b) (200–250) mm x 50 mm Hardwood .....metre

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

**PS 69.07 Renew Bridge Timbers – Bailey Bridge Kerbs/Ribbands/Edge beams.....metre**

(a) 150 mm x 150 mm Softwood .....metre

(b) 150 mm x 150 mm Hardwood .....metre

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

**PS 69.08 Renew Bridge Timbers – Bailey Bridge Ribband bolts (specify minimum size)-No**

The unit of measurement shall be the number of bailey bridge ribband bolts.

The tendered rate shall include the supply of bolts and all accessories to site and installation of bailey bridge elements.

**PS 69.09 Renew Bridge Timbers Beams/Bearers (300 – 450mm diameter).....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

**PS 69.10 Repair of deck parapets).....metre**

This item includes the repair of damaged steel deck parapets on the sides of the bridge

deck.

Work under this item shall be measured and paid for per linear metre repaired. The rate per metre shall be full compensation for the cost of materials, labour, transport and welding.

**PS 69.11 Repairing reinforced concrete deck slabs and beams.....square metre**

This item includes the repair of damaged deck slabs and beams of the bridge deck.

Work under this item shall be measured and paid for per square metre repaired. The rate per square metre shall be full compensation for the cost of materials, labour and transport.

**PS 69.12 Sealing cracks on concrete decks.....metres**

This item includes the sealing of cracked slabs and beams of the bridge deck.

Work under this item shall be measured and paid for per linear metre sealed. The rate per linear metre shall be full compensation for the cost of materials, labour and transport.

**SECTION PS 7100: TESTING OF MATERIALS AND WORKMANSHIP**

**PS 7101      Scope**

✓ **Add the following to Clause 7101:**

1. The Contractor shall be responsible for conducting such testing as may be required in order to indicate that proposed materials and mix designs comply fully with the requirements of the Specification. These tests shall be performed and submitted for checking, in advance of carrying out Works. The Contractor shall also carry out such further monitoring tests as may be required by the Specification during the performance of the Works.
2. Except where otherwise provided for in the Contract, the cost of testing shall be borne by the Contractor and shall be deemed to be included in his tendered rates for the work item.

## **Section 6D**

### **Supplementary Information**

## **Section 6D – Supplementary Information**

The following forms shall be used in the administration of the contract

- (i) Standard Works Order Format
- (ii) Wages Record Form
- (iii) Dayworks Approval Form
- (iv) Project Sign Board
- (v) Site Diary Form
- (vi) Labour Return Form
- (vii) Contractors' Assessment Forms
- (viii) Environmental Monitoring Form
- (ix) Performance Assessment Form

**ROADS AUTHORITY  
ROUTINE TERM MAINTENANCE PROGRAMME  
WORKS ORDER**

Works Order No	<input type="text"/>	Issued By	<input type="text"/>	<input type="text"/>	(For Employer)
Contract No.	<input type="text"/>	Date Received	<input type="text"/>	<input type="text"/>	
Date W.O. Prepared	<input type="text"/>	Accepted By	<input type="text"/>	<input type="text"/>	(For Contractor)

The Following Works are instructed pursuant to the Conditions of Contract and Specifications

(Description of Work)
-----------------------

Location of Works	Region <input type="text"/>	Road No. <input type="text"/>	
	District <input type="text"/>	Start (km) <input type="text"/>	
		Finish (km) <input type="text"/>	
Commencement Date of Works	<input type="text"/>	(if required to be stated)	
Period of Completion	<input type="text"/>	(days following receipt of W.O.)	
<b>Date Due for Completion</b>	<input type="text"/>	Extension if Granted	<input type="text"/> Days
Extended Date for Completion	<input type="text"/>	(where applicable)	
Programme Required	<input type="text"/> Yes or No	Method Statement	<input type="text"/> Yes or NO
Method of Valuation	<input type="text"/>	BOQ or Dayworks	
Monthly Payments Permitted	<input type="text"/> Yes or No	(where specifically provided for)	
Provision for Liquidated Damages	<input type="text"/>	MK per day	
Notified Date of Completion	<input type="text"/>	Received on	<input type="text"/>
Take Over by Employer	<input type="text"/>	Days Late	<input type="text"/>

Description of any Defects in Work

(Description of any Defects in Work)
--------------------------------------

Employer's estimate of defect rectification costs (withheld from payments)							<input type="text"/>
Final date set for rectification (pending permanent deduction of cost)							<input type="text"/>
Bill Item	Description	Unit	Estimated Quantity	Rate (MK)	Estimated Value (MK)	Actual Quantity	Actual Value (MK)
Total Measured Works							<input type="text"/>
Add 16.% of Measured Works as value Added Tax							<input type="text"/>
							<input type="text"/>
<b>Total Works Order Value</b>							<input type="text"/>
Liquidated Damages Deducted							<input type="text"/>
Defect Rectification Cost Deducted							<input type="text"/>
<b>Settled Final Account Amount</b>							<input type="text"/>

<b>VALUATION CERTIFIED</b>	For Contractor	_____	Date	_____
	For Supervisor	_____	Date	_____
	For Employer	_____	Date	_____



<b>WAGES RECORD</b>					
<b>Contract Name:</b>					
<b>Contract No:</b>				<b>Contract Sum: MK</b>	
<b>Start Date:</b>					
<b>Contract Period:</b>		<b>Extention of Time:</b>			
<b>Revised Completion date:</b>					
<b>Contractors Name:</b>					
Item	Labour Type	Number Male	Number Femail	Duration Worked	Total Wages Paid (Mk)
1	Management				
2	Head Office staff				
3	Site Agent				
4	Foreman				
5	Casual Labourers*				
6	Other Staff				
	<b>Total</b>				
<b>Any Other Information on Labour issues on the Contract:</b>					

\* Please Attach list of casual labourers

Submitted By:..... Signed & Stamped.....

Date of Preparation:

Scope of Works:

Locality of the works:

Function:

Series 900 : Dayworks						
Id	Plant	Unit	Quantities			Reason/Motivation for the variation
			Estimated	Executed	Variation	
901	D6 Dozer	Hour				
902	D4 Dozer	Hour				
903	Motor grader 125 - 150 HP	Hour				
904	Motor grader 160 - 200 HP	Hour				
905	Excavator 0.5 - 1.0 cum	Hour				
906	Front-end loader 1.5 - 2 cum	Hour				
907	Vibrating roller (self propelled) 8 - 12 tonnes	Hour				
908	Smooth wheeled roller 10 - 12 tonnes	Hour				
909	Pneumatic tyred roller 25 - 30 tonnes	Hour				
910	Pedestrian vibrating roller (0.75 - 2 tonnes)	Hour				
911	Plate compactor (vibratory)	Hour				
912	Water bowser with spray bar (truck mounted)	Hour				
913	Truck - flatbed lorry 5-10 tonne capacity	Hour				
914	Truck - tipper 8-12 tonne capacity	Hour				
915	Truck - tipper 15 tonne capacity	Hour				
916	Pick-up 4WD	Hour				
917	Water pump 75mm with hose	Hour				
918	Concrete Mixer 0.5 cum	Hour				
	<b>Labour</b>					
919	Unskilled	Hour				
920	Ganger	Hour				
921	Tradesman	Hour				
	<b>Materials</b>					
922a	Provisional Sum for Purchase of Materials - 7 Tonne Trips					
a1	Quarry Dust	Trips				
a2	Crusher run	Trips				
a3	Fine aggregate - Sand	Trips				
a4	Other (please specify)	Trips				
922b	Percentage addition to 922a a to cover profit, handling and all other costs	%				

Consultant

Prepared By:

Signature:

Date:

Contractor

Accepted By:

Signature:

Date:

Roads Authority

Approved By:

Signature:

Date:

NB:

1. This form shall be filled in and approved before the contractor starts the works
2. The quantities herein are estimates (but should be strictly adhered to). The contractor should seek verbal approval before exceeding the quantities
3. Blank copies of this forms should be filled in on site during handovers of the sites

## Standard Sign Board

**REPUBLIC OF MALAWI  
THE ROADS AUTHORITY**

**PROJECT**

**CONTRACT PERIOD**

**FUNDING**

**CONSULTING ENGINEER**

**CONTRACTORS**

CONTRACT NO.:

CONTRACT NAME:

COMMENCEMENT DATE:

CONTRACT PERIOD:

ROADS FUND ADMINISTRATION

Notes:

Boards A and B: White or cream lettering on blue background

Other boards: Dark blue lettering on white or cream background

Board	Letter height	Gap between lines and edges	Gap between lines
A	150	100	75
B	75	50	25
C	100	75	50
Others	75	50	25

- Gap between boards to be 300mm
- Boards to be 25mm thick, external quality plywood
- Signboard to be mounted with lower edge 1.5m above ground level at a location to be decided by the Engineer
- Supports to be 150mm x 75mm timber
- RA logo is optional



ROADS AUTHORITY MAINTENANCE DEPARTMENT CONTRACT SITE DIARY FORM						Date: Sheet No.			
SITE DATA									
RA DIVISION			REGION			DISTRICT			
CONTRACT No.			CONTRACT TITLE:						
CONTRACTOR NAME					CONSULTANT NAME				
ROAD No.		SECTION No.		FROM:			TO:		
DAILY FORMATION									
Date			Day		Working time		From:		To:
WEATHER CONDITION			Rain	Yes	No	Working Condition	Poor	Fair	Good
MAINTENANCE ACTIVITIES									
	BOQ Item	Description				Location			
1									
2									
3									
RESOURCES ON SITE									
1	PERSONNEL Number	Site Ag	Site Eng	Foreman	Driver	Operator	Craftman	Unskilled	Total
2	PLANT AND VEHICLE Number	Plant	Plant	Trk Vels	Van	Motorbike	Bicycle	Others	Total
3	MATERIALS Quantity	Gravel		Crushed Stone	Aggregate			Cement	
	MATERIALS Quantity	Premix		Timber	Diesel			Petrol	
		kg		cum	litre			litre	
OTHER ACTIVITIES									
	Type	Location				Purposes			
1	Survey								
2	Setting - Out								
3	Sampling								
4	Testing								
5	Measurement								
6	Review Program								
7	review Cost								
8	Inspection								
9	Meeting								
10	Visitors								
11	Others								
REMARKS									
INSTRUCTIONS FOR FILLING IN THE FORM									
DAILY FILLING IN: Filled in by Contractor's Site Agent (In Triplicate Copies)									
WEEKLY DISTRIBUTION: Contractor Office: 1 copy, Consultant office: 1 copy and RA Regional Office: 1 copy									

## LABOUR RETURN FORM

### (1) By Project

	Description	Site Supervisory Staff (Site Agent/ foreman, Site clerk)		Skilled Labour (Carpenters, b/layers, steel fixers, Drivers etc)		General labourers		Total staff
		Male	Female	Male	Female	Male	Female	

### (2) By District

This will be done for each quarter i.e. every 3 months. If there was nothing, please indicate "0" in the boxes

	District	Site Supervisory Staff (Site Agent/ foreman)		Skilled Labour (Carpenters, b/layers, steel fixers, Drivers etc)		General labourers		Total staff
		Male	Female	Male	Female	Male	Female	

## **Section 7**

# **General Conditions of Contract**

## Section 7: General Conditions of Contract

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## **Section 7. General Conditions of Contract**

### **G. General**

#### **1. Definitions**

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:

The “Activity Schedule” means the priced Activity Schedule forming part of the Bid for a Lump Sum Contract.

An “Admeasurement Contract” means a contract based on a priced Bill of Quantities or schedule of unit price rates in which payment to the Contractor is subject to measurement of physical quantities of items by the Employer.

The “Adjudicator” is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in Clauses 24 and 25 hereunder.

“Bill of Quantities” means the priced and completed Bill of Quantities forming part of the Bid for an Admeasurement contract.

“Compensation Events” are those defined in Clause 44 hereunder.

The “Completion Date” is the date of completion of the Works as certified by the Project Manager, in accordance with Sub-Clause 52.1.

The “Contract” is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in Clause 2.3 below.

The “Contract Price” is the price stated in the Notice of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

“Contractor” means the Supplier appointed under the Contract for the performance of the Works.

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

“Dayworks” are varied work inputs subject to payment on a time basis for the Contractor’s employees and Equipment, in addition to payments for associated Materials and Plant.

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

The “Defects Liability Certificate” is the certificate issued by Project Manager upon correction of defects by the Contractor.

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

“Drawings” include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

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

The “Initial Contract Price” is the Contract Price listed in the Procuring Entity’s Notice of Acceptance.

The “Intended Completion Date” is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Special Conditions of Contract. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

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

“Plant” is any integral part of the Works that shall have a mechanical, electrical, chemical,

or biological function.

The “Procuring Entity” is the party who employs the Contractor to carry out the Works.

The “Project Manager” is the person named in the Special Conditions of Contract (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.

The “Site” is the area defined as such in the Special Conditions of Contract.

“Site Investigation Reports” are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.

“Specification” means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

The “Start Date” is given in the Special Conditions of Contract. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

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.

The “Supplier” is a person or corporate body whose Bid to carry out the Works has been accepted by the Procuring Entity.

The “Contractor’s Bid” is the completed bidding document submitted by the Contractor to the Procuring Entity.

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

A “Variation” is an instruction given by the Project Manager which varies the Works.

The “Works” are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Special Conditions of Contract.

## **2. Interpretation**

- 2.1 In interpreting these General Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager will provide instructions clarifying queries about these General Conditions of Contract.
- 2.2 If sectional completion is specified in the Special Conditions of Contract, references in the General Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
  - (1) Agreement,
  - (2) Notice of Acceptance,
  - (3) Contractor’s Bid,
  - (4) Special Conditions of Contract,
  - (5) General Conditions of Contract,
  - (6) Specifications,
  - (7) Drawings,
  - (8) Bill of Quantities or Activity Schedule, and

- (9) any other document listed in the Special Conditions of Contract as forming part of the Contract.

### **3. Language and Law**

- 3.1 The language of the Contract is English and the governing law is that of Republic of Malawi.

### **4. Project Manager's Decisions**

- 4.1 Except where otherwise specifically stated and subject to any restrictions in the Special Conditions of Contract, the Project Manager will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

### **5. Delegation**

- 5.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to an Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

### **6. Communications**

- 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

### **7. Subcontracting**

- 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.

### **8. Other Suppliers**

- 8.1 The Contractor shall cooperate and share the Site with other suppliers, contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Suppliers, as referred to in the Special Conditions of Contract. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Suppliers, and shall notify the Contractor of any such modification.

### **9. Personnel**

- 9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the Special Conditions of Contract, to carry out the functions stated in the Schedule or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Schedule.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the work in the Contract.



## **10. Employer's and Contractor's Risks**

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

## **11. Employer's Risks**

11.1 From the Start Date until the Defects Correction Certificate has been issued, the following are Employer's risks:

- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to:
  - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or
  - (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the Republic of Malawi.

11.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

- (a) a Defect which existed on the Completion Date,
- (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
- (c) the activities of the Contractor on the Site after the Completion Date.

## **12. Contractor's Risks**

12.1 From the Starting Date until the Defects Correction Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

## **13. Insurance**

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Special Conditions of Contract for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- (d) personal injury or death.

- 13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable as required to rectify the loss or damage incurred.
- 13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.
- 13.5 Both parties shall comply with any conditions of the insurance policies.

#### **14. Site Investigation Reports**

- 14.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the Special Conditions of Contract, supplemented by any information available to the Bidder.

#### **15. Queries about the Special Conditions of Contract**

- 15.1 The Project Manager will clarify queries on the Special Conditions of Contract.

#### **16. Contractor to Construct the Works**

- 16.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

#### **17. The Works to Be Completed by the Intended Completion Date**

- 17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Programme submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

#### **18. Approval by the Project Manager**

- 18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings.
- 18.2 The Contractor shall be responsible for design of Temporary Works.
- 18.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

## **19. Safety**

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

## **20. Discoveries**

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

## **21. Possession of the Site**

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Special Conditions of Contract, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.

## **22. Access to the Site**

22.1 The Contractor shall allow the Project Manager and any person authorised by the Project Manager 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.

## **23. Instructions**

23.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

## **24. Disputes**

24.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within fourteen (14) days of the notification of the Project Manager's decision.

## **25. Procedure for Disputes**

25.1 The Adjudicator shall give a decision in writing within twenty-eight (28) days of receipt of a notification of a dispute.

25.2 The Adjudicator shall be paid by the hour at the rate specified in the Bid Data Sheet and Special Conditions of Contract, together with reimbursable expenses of the types specified in the Special Conditions of Contract, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within twenty-eight (28) days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above twenty-eight (28) days, the Adjudicator's decision will be final and binding.

25.3 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the Special Conditions of

Contract.

## **26. Replacement of Adjudicator**

- 26.1 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within thirty (30) days, the Adjudicator shall be designated by the Appointing Authority designated in the Special Conditions of Contract at the request of either party, within fourteen (14) days of receipt of such request.

## **H. Time Control**

### **27. Programme**

- 27.1 Within the time stated in the Special Conditions of Contract, the Contractor shall submit to the Project Manager for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 27.2 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 27.3 The Contractor shall submit to the Project Manager for approval an updated Programme at intervals no longer than the period stated in the Special Conditions of Contract. If the Contractor does not submit an updated Programme within this period, the Project Manager may withhold the amount stated in the Special Conditions of Contract from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 27.4 The Project Manager's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

### **28. Extension of the Intended Completion Date**

- 28.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 28.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within twenty-one (21) days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

### **29. Acceleration**

29.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Employer and the Contractor.

29.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

### **30. Delays Ordered by the Project Manager**

30.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

### **31. Management Meetings**

31.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

31.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

### **32. Early Warning**

32.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

32.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

## **I. Quality Control**

### **33. Identifying Defects**

33.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

### **34. Tests**

34.1 If the Project Manager instructs the Contractor to carry out a test not specified in the

Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

### **35. Correction of Defects**

- 35.1 The Project Manager 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 Special Conditions of Contract. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 35.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

### **36. Uncorrected Defects**

- 36.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager will assess the cost of having the Defect corrected, and the Contractor will be liable for this amount. The amount will be deducted from current and future payment certificates, or paid by the Contractor if insufficient funds are due under the contract.

## **J. Cost Control**

### **37. Bill of Quantities or Activity Schedule**

- 37.1 This Contract is:

- (a) An Admeasurement Contract with a Bill of Quantities, subject to Option 1; or
  - (b) A Lump Sum Contract with an Activity Schedule, subject to Option 2,
- as indicated in the Special Conditions of Contract.

#### **Option 1: Bill of Quantities for Admeasurement Contract**

- 37.2 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 37.3 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

#### **Option 2: Activity Schedule for Lump Sum Contract**

- 37.4 The Contractor shall provide updated Activity Schedules within fourteen (14) days of being instructed to by the Project Manager. The activities on the Activity Schedule shall be co-ordinated with the activities on the Programme.
- 37.5 The Contractor shall show delivery of Materials to the Site separately on the Activity Schedule if payment for Materials on Site shall be made separately.

### **38. Change in the Bill of Quantities or Activity Schedule**

#### **Option 1: Changes in the Bill of Quantities for Admeasurement Contracts**

- 38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than twenty-five (25) percent, provided the change exceeds

one (1) percent of the Initial Contract Price, the Project Manager shall adjust the rate or price to allow for the change.

38.2 The Project Manager shall not adjust rates or prices from changes in quantities if thereby the Initial Contract Price is exceeded by more than five (5) percent, except with the prior approval of the Employer.

38.3 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

#### **Option 2: Changes in the Activity Schedule for Lump Sum Contracts**

38.4 The Activity Schedule shall be amended by the Contractor to accommodate changes of Programme or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

### **39. Variations**

39.1 All Variations shall be included in updated Programmes (or in the case of Lump Sum Contracts in updated Programmes and Activity Schedules) produced by the Contractor.

### **40. Payment for Variations**

40.1 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

40.2 For Admeasurement Contracts only, if the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates, which shall be lower, for the relevant items of work.

40.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

40.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

40.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

### **41. Cash Flow Forecasts**

41.1 When the Programme (or in the case of Lump Sum Contracts the Programme or Activity Schedule) is updated, the Contractor shall provide the Project Manager with an



updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

## **42. Payment Certificates**

- 42.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed and materials on site less the cumulative amount certified previously.
- 42.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 42.3 The value of work executed and materials on site shall be determined by the Project Manager.
- 42.4 The value of work executed and materials on site shall comprise the value of:
- (a) the quantities of the items in the Bill of Quantities completed in the case of Admeasurement Contracts; or
  - (b) completed activities in the Activity Schedule in the case of Lump Sum Contracts.
- 42.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 42.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

## **43. Payments**

- 43.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within forty-five (45) days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 43.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 43.3 Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
- 43.4 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

## **44. Compensation Events**

- 44.1 The following shall be Compensation Events:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date



stated in the Special Conditions of Contract.

- (b) The Employer modifies the Schedule of Other Suppliers in a way that affects the work of the Contractor under the Contract.
- (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
- (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
- (e) The Project Manager unreasonably does not approve a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Notice of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other Suppliers, contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The advance payment is delayed.
- (j) The effects on the Contractor of any of the 's Risks.
- (k) The Project Manager unreasonably delays issuing a Certificate of Completion.
- (l) Other Compensation Events described in the Special Conditions of Contract or determined by the Project Manager shall apply.

44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.

44.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

## **45. Tax**

45.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date twenty-eight (28) days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of Clause 47.

## **46. Currencies**

46.1 Payments shall only be made in Malawi Kwacha.

## **47. Price Adjustment**

47.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Special Conditions of Contract. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$$P_c = A_c + B_c I_{mc}/I_{oc}$$

where:

$P_c$  is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.

$A_c$  and  $B_c$  are coefficients specified in the Special Conditions of Contract, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c”; and

$I_{mc}$  is the index prevailing at the end of the month being invoiced and  $I_{oc}$  is the index prevailing twenty-eight (28) days before Bid opening for inputs payable; both in the specific currency “c”.

47.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

## **48. Retention**

48.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Special Conditions of Contract until Completion of the whole of the Works.

48.2 On completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected.

48.3 With the approval of the Employer, the Contractor may substitute retention money with an “on demand” Bank guarantee.

## **49. Liquidated Damages**

49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Special Conditions of Contract for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the Special Conditions of Contract. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor’s liabilities.

- 49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 43.1.

## **50. Advance Payment**

- 50.1 The Employer shall make advance payment to the Contractor of the amount stated in the Special Conditions of Contract by the date stated in the Special Conditions of Contract, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.
- 50.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilisation expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
- 50.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

## **51. Securities**

- 51.1 The Performance Security shall be provided to the Employer no later than twenty-one (21) days after receipt of the Notice of Acceptance and shall be issued in the form of a Bank Guarantee in the format specified in the contract and in an amount specified in the Special Conditions of Contract and by a bank acceptable to the Employer. The Performance Security (Bank Guarantee) shall be valid until a date twenty-eight (28) days from the date of issue of the Certificate of Completion.

## **52. Dayworks**

- 52.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 52.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two (2) days of the work being done.
- 52.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

## **53. Cost of Repairs**

- 53.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the

Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

## **K. Completion of the Contract**

### **54. Completion**

54.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager will do so upon deciding that the work is completed.

### **55. Taking Over**

55.1 The Employer shall take over the Site and the Works within seven (7) days of the Project Manager's issuing a Certificate of Completion.

### **56. Final Account**

56.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within sixty (60) days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within sixty (60) 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 Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

### **57. Operating and Maintenance Manuals**

57.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Special Conditions of Contract.

57.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Special Conditions of Contract, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the Special Conditions of Contract from payments due to the Contractor.

### **58. Termination**

58.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

58.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- (a) the Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorised by the Project Manager;
- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty-eight (28) days;

- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within ninety (90) days of the date of the Project Manager's certificate;
- (e) the Project Manager 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 determined by the Project Manager;
- (f) the Contractor does not maintain a Security, which is required;
- (g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the Special Conditions of Contract; and
- (h) if the Contractor, in the judgment of the Employer has engaged in corrupt, fraudulent, collusive or coercive practices in competing for or in executing the Contract.

For the purpose of this paragraph:

"corrupt practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution.

"fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract;

"collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Employer, designed to establish prices at artificial, noncompetitive levels; and

"coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.

58.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

58.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

## **59. Payment upon Termination**

59.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Special Conditions of Contract. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

59.2 If the Contract is terminated for the Employer's convenience or because of a

fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

## **60. Property**

- 60.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

## **61. Force Majeure**

- 61.1 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Contractor that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Contractor. Such events may include, but not be limited to, acts of the Employer in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 61.2 If a Force Majeure situation arises, the Contractor shall promptly notify the Employer in writing of such condition and the cause thereof. Unless otherwise directed by the Employer in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 61.3 The Contractor shall not be liable for forfeiture of its performance security or retention monies held, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

## **62. Release from Performance**

- 62.1 If the Contract is frustrated by an event of Force Majeure or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

## **Section 8**

# **Special Conditions of Contract**

## Section 8 - Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Clause Reference	SCC Clause No.	Special Conditions
GCC 1.1	SCC 1.1	<p>The Procurement Entity is: <b><u>Roads Authority of Malawi</u></b></p> <p>The Project Manager is: <b><u>To be advised (TBA)</u></b></p> <p>The name and procurement reference number of the Contract is: <b><u>Grading and Associated Drainage Works in Mzimba District and Procurement Reference Number: RA/MAI/2025-26/NR/MZ/03.</u></b></p> <p>The Works consist of: <b><u>Grading and associated drainage works.</u></b></p> <p>The site is located: in <b><u>Mzimba District</u></b> and is defined in Drawings Nos.: <b><u>NA</u></b></p> <p>The Start Date shall be: <b><u>14 days from site possession date</u></b></p> <p>The intended Completion Date for the whole of the works shall be: <b><u>90 days after the Start Date</u></b></p> <p>The word "Bill of Quantities" is synonymous with 'Priced Schedules'.</p>
GCC 2.3	SCC 2.3	<p>Delete Clause 2.3 in its entirety and replace with the following:</p> <p>For the purpose of representation, the priority of documents shall be in accordance with the following sequence:</p> <ul style="list-style-type: none"> <li>(a) Agreement</li> <li>(b) Minutes of Contract Negotiations</li> <li>(c) Notice of Acceptance</li> <li>(d) the Letter of Bid</li> <li>(e) the Special Conditions of Contract</li> <li>(f) the General Conditions of Contract</li> <li>(g) the Particular Specifications</li> <li>(h) the Standard Specifications for Works</li> <li>(i) the Drawings and</li> <li>(j) the priced Bill of Quantities</li> <li>(k) the completed Qualification Information Forms and any other documents forming part of the Contract.</li> </ul> <p>All information supplied by the Contractor on the Qualification Information Forms (Section 4) will be contractually binding. The Contractor shall be in breach of contract, in case when the information offered in these forms is not implemented by the Contractor during maintenance works.</p>



GCC Clause Reference	SCC Clause No.	Special Conditions
<b>GCC4.1</b>	<b>SCC4.1</b>	<p>The Project Manager shall obtain the specific approval of the Employer before taking action under the following clauses</p> <ul style="list-style-type: none"> <li>(i) Clause 7: Subcontracting</li> <li>(ii) Clauses 28: Extension of the intended Completion Date</li> <li>(iii) Clause 56: Taking Over</li> <li>(iv) Clauses 39 and 40: Variations</li> <li>(v) Clause 44 Compensation Events (Contractors Claim)</li> </ul> <p>Notwithstanding the obligation as set out above to obtain approval, if in the opinion of the Project Manager, an emergency occurs affecting the safety of life, or of the works or of adjoining property, the Project Manager may without relieving the Contractor of any of his duties and responsibilities under the Contract instruct the Contractor to execute all work or to do all things as may, in the opinion of the Project Manager be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of the approval of the Employer, with any such instruction of the Project Manager. The Project Manager shall determine an addition to the contract price in respect of such instruction if and as may be relevant and shall notify the Contractor accordingly, with a copy to the Employer.</p>
<b>GCC 7.1</b>	<b>SCC 7.1</b>	<p><b>Subcontracting</b></p> <p>In the event of non-performance, the Project Manager shall instruct the contractor to subcontract the works within 14 days and failure to do that the Project</p> <p>Manager shall nominate a sub-contractor prior to termination as listed in Schedule 1.6 under Section 4.5 (Qualification Information Forms)</p>
<b>GCC 8.1</b>	<b>SCC 8.1</b>	The Schedule of Other Suppliers <b><u>is not</u></b> part of the Contract
<b>GCC 9.1</b>	<b>SCC 9.1</b>	<p>The Schedule of Key Personnel <b><u>is part</u></b> of the Contract</p> <p>Key personnel as indicated in the Qualification Information Form (paragraph 1.5 of this form) is part of the contract. No site handovers for any contract shall be done without the contractor's key staff. i.e. Site Agent and Foreman. The contractor shall replace his key staff within 14 days of being instructed by the Project Manager to do so. Failure to replace key site personnel shall lead to termination of the contract. The client may at his discretion accept replacement of personnel with slightly lesser experience. This may however attract a penalty of MWK100,000.00 per month for every year of less experience.</p>
<b>GCC 13.1</b>	<b>SCC 13.1</b>	<p>The minimum insurance cover and deductibles shall be:</p> <ul style="list-style-type: none"> <li>(l) The minimum cover for insurance of the works, plant and materials is: <b>MWK 0.5 million (≤15 million contract amount); MWK 1.0 million (≥ 15 million contract amount); MWK 2.0 million (≥ 50 million contract amount); MWK 3.0 million (≥ 200 million contract amount); MWK 5.0 million (≥ 500 million contract amount);</b> per occurrence with the number of</li> </ul>

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>occurrences unlimited.</p> <p>(m) The maximum deductible for insurance of the Works, Plant and Materials is: N/A</p> <p>(n) The minimum cover for insurance of equipment is <b>MWK1.0 million (≤15 million contract amount); MWK 2.0 million (≥ 15 million contract amount); MWK 4.0 million (≥ 50 million contract amount); MWK 5.0 million (≥ 200 million contract amount); MWK 10.0 million (≥ 500 million contract amount);</b> per occurrence with the number of occurrences unlimited.</p> <p>(o) The maximum deductible for insurance of equipment is: N/A</p> <p>(p) The minimum cover for insurance of property is <b>MWK 0.5 million (≤15 million contract amount); MWK 1.0 million (≥ 15 million contract amount); MWK 2.0 million (≥ 50 million contract amount); MWK 3.0 million (≥ 200 million contract amount); MWK 5.0 million (≥ 500 million contract amount);</b></p> <p>(q) The maximum deductible for insurance of property is: N/A</p> <p>The minimum cover for personal injury or death insurance is <b><u>MWK3 million</u></b> with no deductible.</p>
<b>GCC 14.1</b>	<b>SCC 14.1</b>	Site Investigation Report(s) <b><u>are not</u></b> part of the contract
<b>GCC 16</b>	<b>SCC 16.2</b>	<p><b>Add the following sub clause</b></p> <p>In the case of outstanding pothole patching works; if the contractor has not patched these potholes within 48 hours after receiving the instruction of the Project Manager, then penalties shall apply. The applicable financial penalty would be equal to the cost of the outstanding pothole patching works. Additionally, after failing to repair the potholes within the 48 hours; the Project Manager may also consider removal of the Contractor's key staff.</p>
<b>GCC 16</b>	<b>SCC 16.3</b>	<p><b>Add the following sub clause</b></p> <p>The Contractors' performance in constructing/installing the works shall be assessed using the Consultants' and Contractors' Vendor Rating System, and the Contractors shall be required to adhere to the requirements and Provisions in the Consultants' and Contractors' Vendor Rating System.</p>
<b>GCC 17</b>	<b>SCC 17.2</b>	<p><b>Add the following sub clause</b></p> <p>The Contractors' performance in constructing/installing the works shall be assessed using the Consultants' and Contractors' Vendor Rating System, and the Contractors shall be required to adhere to the requirements and Provisions in the Consultants' and Contractors' Vendor Rating System.</p>
<b>GCC 19</b>	<b>SCC 19</b>	Change the clause name to <b>"Safety, Health and environment"</b>

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>Delete the text of Clause 19 in its entirety and replace with the following:</p> <p>Except otherwise stated in the Technical Specifications, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulances service are available at all times at the Site at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all the necessary welfare and hygiene requirements and for the prevention of epidemics.</p> <p>The Contractor shall appoint a Safety Officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Work, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.</p> <p>HIV-AIDS Prevention</p> <p>The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.</p> <p>The Contractor:</p> <ul style="list-style-type: none"> <li>(a) is responsible for implementing an HIV prevention program among the Contractor's employees (and the local community) for the duration of the Contractor's contract and commencing as soon as practicable after the Contractor's employees arrives at the site/s in conjunction with occupational health staff of the contractor and the local health authorities involved in HIV/AIDS prevention;</li> <li>(b) can sub-contract a Service Provider in the event that he will not be able to implement the Program; when sub-contracting with the Service Provider, the Contractor gives any representative of the service provider and the Employer all reasonable access to the site in connection with HIV Prevention Program;</li> <li>(c) instructs his employees to participate in the HIV prevention in the</li> </ul>

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>course of their employment and during the working hours or any period of overtime provided for the relevant employment contracts;</p> <p>(d) Does nothing to dissuade the Contractor's employees from participating in the HIV Prevention Program.</p> <p>The Contractor shall be entitled to be reimbursed by the Employer for any eligible payments. These payments include ones, which are made under a sub-contract made for the purpose of clause 19 in accordance with relevant provisions in the Contract.</p> <p>Where the Contract sub-contracts any of its obligations under the contract, it shall require any sub-contractor to comply with sub-clauses (b) through (d) of the Contract as if it were the contractor</p> <p>The Contractor shall install and maintain adequate personnel and measures to ensure the safety of road users during construction of works, in particular, the site must be left in a safe, trafficable condition outside normal working hours. The minimum expected traffic control measures are included in the Particular Specifications and Drawings. Nevertheless, the Contractor remains responsible for traffic control</p> <p><b>The "Occupational Safety, Health and Welfare Act (Malawi) No 21 of 1997" is applicable for this contract.</b></p> <p><b><u>Add the following new Clause:</u></b></p> <p><b>Protection of the Environment</b></p> <p>The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.</p> <p>The Contractor shall adhere at all times to the Environmental Management Plan contained in the Supplementary Information under Section 6 D. The Contractor will be held accountable for any costs arising from his negligence with regard to the environment. The Employer reserves the right to recover any such costs by deduction of the relevant amount from interim payment certificates.</p>
<b>GCC 21.1</b>	<b>SCC 21.1</b>	The Site Possession Date shall be <b><u>within 14 days after</u></b> receipt of Notice of Acceptance.
<b>GCC 25.2</b>	<b>SCC 25.2</b>	Fees and Types of reimbursable expenses to be paid to the Adjudicator are: <b><u>To be agreed upon at time of appointment</u></b>
<b>GCC 25.3</b>	<b>SCC 25.3</b>	The institution whose arbitration procedures shall be used is <b><u>the National Construction Industry Council of Malawi (NCIC)</u></b> and

GCC Clause Reference	SCC Clause No.	Special Conditions
		Arbitration shall take place <b><u>in Lilongwe – Malawi</u></b>
<b>GCC 26.1</b>	<b>SCC 26.1</b>	The Appointing Authority for the Adjudicator is: <b>NCIC</b>
<b>GCC 27.1</b>	<b>SCC 27.1</b>	The Contractor shall submit a revised Programme for the Works within <b>14 days</b> of receipt of Notice of Acceptance.
<b>GCC 27.3</b>	<b>SCC 27.3</b>	The Period between Programme Updates is <b>28</b> days. The amount to be withheld for late submission of an updated Programme is: <b>5%</b> of Current Interim Payment Certificate amount.
<b>GCC 28</b>	<b>SCC 28</b>	Replace the wording “Project Manager” with “Employer” in Clauses 28.1 and 28.2. Add the following to Clause 28.1: “Extension of the Intended Completion Date will also be granted for abnormal rainfall as defined in the Particular Specifications”
<b>GCC 32</b>	<b>SCC 32</b>	<b>Early Warning</b>
	<b>SCC 32.1</b>	<b>Add the following to Clause 32.1</b>  If the Contractor considers himself to be entitled to any Extension of Time for Completion and/or any additional payment (Compensation Event) under any clause of these General Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Project Manager, describing the event or circumstance giving the rise to the claim. The notice shall be given as soon as practicable, and no later than <b>28 days</b> after the Contractor becomes aware, or should have become aware, of the event or circumstance.  If the Contractor fails to give an early warning within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment because of a Compensation Event and the Employer shall be discharged from all liability in connection with claims for Extension of the Intended Completion Date or for a Compensation Event.
	<b>SCC 33.2</b>	<b>Add the following Sub-clause:</b>  The Project Manager shall also check and confirm quality, quantity and cost of delivery of Special Materials as included in the List of Basic Material Prices (see Section 4). No Special Material will be removed from site and/or camp without authorization of the Project Manager
<b>GCC 35.1</b>	<b>SCC 35.1</b>	The Defects Liability Period is: NA
<b>GCC 37.1</b>	<b>SCC 37.1</b>	This contract is an <b>Ad-measurement</b> Contract
<b>GCC 42</b>	<b>SCC 42</b>	Payments Certificates
<b>GCC 42.1</b>	<b>SCC 42.1</b>	Delete: Sub-clause GCC 42.1 and replace with the following:  The contractor shall give reasonable notice to the Project Manager of any completed and accepted work in terms of quality which may be required to be measured separately for payment purposes. The Project Manager shall then arrange joint measurements to be carried out by representatives of Contractor, Project Manager and Employer.
<b>GCC42.2</b>	<b>SCC42.2</b>	<b>Add the following to Clause GCC 42.2:</b>  The contractor shall provide to the Project Manager proof of payments of

GCC Clause Reference	SCC Clause No.	Special Conditions
		wages to the workforce working for the contractor. Failure to provide such records or proof of payment of wages any equal amount of money will be withheld from the certificate until such a time the proof is received failing which the Employer shall reserve the right to proceed to pay the wages directly to the work force through their respective local authorities and labour offices.
<b>GCC43</b>	<b>SCC43</b>	Payments
<b>GCC 43.1</b>	<b>SCC 43.1</b>	Add the following to Clause GCC 43.1:  The rate of interest for late payments shall be <b>2%</b> (two percent) above the prevailing commercial borrowing rates
	<b>SCC 43.5</b>	<b>Add the following Sub-Clause</b>  The Employer is not liable for compensation in regards to any construction equipment or material brought on the site which was not fully used during the construction and maintenance of the works, and the Employer cannot be held liable for loss or damage of any of the said equipment or material brought on the site by the Contractor or which was used during the execution of this Contract.
<b>GCC 44.1 (1)</b>	<b>SCC 44.1 (1)</b>	The following events shall also be Compensation Events: <b>None.</b>  <b>Abnormal Rainfall is not a Compensation Event</b> , but will provide for Extension of the Intended Completion Date with time related cost for relevant items.
<b>GCC 44.3</b>	<b>SCC 44.3</b>	<b>Replace Clause GCC 44.3 with the following:</b>  Within <b>45 days</b> after the contractor became aware (or should have become aware) of the events or circumstance giving rise to a claim for a compensation event or for the extension of time or within such other periods he shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim for a Compensation Event and/or for the extension of time and the amount of additional payment claimed.  Add the following at the end of this Clause:  Within <b>45 days</b> after receiving a Claim, or within such other period as may be proposed by the Project Manager, the Employer shall respond with approval or disapproval with detailed comments.  If the Employer fails to give his decision within the period of <b>45 days</b> , he shall be deemed to have made a decision dismissing the claim.
<b>GCC 47</b>	<b>SCC 47</b>	The Contract <b>is not</b> subject to price adjustment in accordance with Clause 47 of the Conditions of Contract and the Supplementary Bid Information in Section 4 – Qualification Forms.
<b>GCC 48.1</b>	<b>SCC 48.1</b>	The proportion of payment retained is <b>10%</b> from each Interim Payment Certificate and the maximum amount retained shall be <b>5%</b> of the Total Contract price on completion of the whole of the Works.
<b>GCC 49.1</b>	<b>SCC 49.1</b>	The rate for liquidated damages is <b>0.1%</b> of the outstanding works (less contingency and VAT) per day. The maximum amount of liquidated damages is <b>5%</b> of the final outstanding Amount of works (less contingency and VAT).
<b>GCC 50</b>	<b>SCC 50</b>	The Advance Payment will be equivalent to <b>20%</b> of the Contract Price less contingency and VAT. It will be paid to the Contractor no later than

GCC Clause Reference	SCC Clause No.	Special Conditions								
		<p><b>28 days</b> after receiving the advance payment certificate submitted together with an acceptable Advance Payment Security.</p> <p><b>Add the following to this clause:</b></p> <p>Advance Payment Security for contract values up to MWK50 million only may alternatively be obtained from insurance companies.</p> <p>Advance Payment Security for contract values above MWK50 million shall be obtained from banks only.</p> <p>The Advance Payment Security shall be presented in accordance with the Form of Advance Payment Security included in Section 9.</p> <p>Where the Advance Payment Security is in form of a Bank Guarantee, it shall be issued by:</p> <p>(a) a bank located in Malawi or</p> <p>(b) a foreign bank through a correspondent bank located in Malawi</p>								
	SCC 50.3									
GCC 50.3	SCC 50.3	<p>The Advance Payment will be repaid by deducting as below:</p> <table><tr><th>Work Percentage Completed</th><th>Payment</th></tr><tr><td>20%</td><td>10%</td></tr><tr><td>50%</td><td>50%</td></tr><tr><td>80%</td><td>100%</td></tr></table>	Work Percentage Completed	Payment	20%	10%	50%	50%	80%	100%
Work Percentage Completed	Payment									
20%	10%									
50%	50%									
80%	100%									
GCC 51	SCC 51	Securities								
GCC51	SCC51.1	<p>Add the following to this Clause</p> <p>Add the following to this Clause</p> <p>The Performance Security shall be <b>10 percent</b> of the accepted Contract Price: This is applicable only for contracts whose values exceed <b>MWK 50 million</b></p> <p>Performance Securities for contract values below MWK100 million only may alternatively be obtained from insurance companies.</p> <p>Performance Securities for contract values above MWK100 million shall be obtained from banks only.</p> <p>The Performance Security shall be presented in accordance with the Form of Performance Guarantee included in Section 9.</p> <p>Where the Performance Security is in form of a Bank Guarantee, it shall be issued by:</p> <p>(a) a bank located in Malawi or</p> <p>(b) a foreign bank through a correspondent bank located in Malawi</p>								
GCC57	SCC57.1	The date by which operating and maintenance manuals are required is: <b>N/A</b>								
GCC57	SCC57.2	<b>“As built” drawings are required at the end of the defects liability</b>								

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p><b>period, to be provided by the site supervising Consultant (Project Manager)</b></p> <p>The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required <b><u>Not applicable</u></b></p>
<b>GCC 59</b>	<b>SCC 59.1</b>	<p>The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is <b><u>15%</u></b></p>
<b>GCC 61</b>	<b>SCC 61</b>	<p><b>Force Majeure</b></p> <p>Delete the text of Clause GCC 62 in its entirety and replace with the following:</p>
	<b>SCC 61.1</b>	<p><b>Definition of Force Majeure</b></p> <p>In this GCC Clause, “Force Majeure” means an exceptional event or circumstance:</p> <ul style="list-style-type: none"> <li>(a) which is beyond a Party’s control,</li> <li>(b) which such Party could not reasonably have provided against before entering into the Contract,</li> <li>(c) which, having arisen, such Party could not reasonably have avoided or overcome, and</li> <li>(d) which is not substantially attributable to the other Party.</li> </ul>
		<p>Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:</p> <ul style="list-style-type: none"> <li>(i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,</li> <li>(ii) rebellion, terrorism, sabotage by persons other than the Contractor’s Personnel, revolution, insurrection, military or usurped power, or civil war,</li> <li>(iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor’s Personnel,</li> <li>(iv) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor’s use of such munitions, explosives, radiation or radio-activity, and</li> <li>(v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.</li> <li>(vi) shortage of diesel and/or bitumen and/or cement in Malawi and any other similar unforeseeable events not within the control of either party and which by the exercise of due diligence neither party is able to overcome.</li> </ul>
	<b>SCC 61.2</b>	<p><b>Notice of Force Majeure</b></p>
	<b>SCC 61.2.1</b>	<p>If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party</p>



GCC Clause Reference	SCC Clause No.	Special Conditions
		became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure
	<b>SCC 61.2.2</b>	The Party shall, having given notice, be excused from performance of its obligations for so long as such Force Majeure prevents it from performing them
	<b>SCC 61.2.3</b>	Notwithstanding any other provision of this SCC Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract
	<b>SCC 61.3</b>	<b>Duty to Minimise Delay</b>
	<b>SCC 61.3.1</b>	Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.
	<b>SCC 61.3.2</b>	A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure
	<b>SCC 61.4</b>	<b>Consequences of Force Majeure</b>
	<b>SCC 61.4.1</b>	<p>If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under SCC Clause 62.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to SCC Clause 44 [Compensation Events] to:</p> <ul style="list-style-type: none"> <li>(a). an extension of time for any such delay, if completion is or will be delayed</li> <li>(b). if the event or circumstance is of the kind described in SCC Clause 62.1.2(i) to (iv) [Definition of Force Majeure] and, in the case of SCC Clause 62.1.2(ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in SCC Clause 13 [Insurance]</li> </ul> <p>The Contractor shall not be liable to forfeiture of his performance guarantee, liquidated damages or termination of default if, and to the extent that, his delay in performance or other failure to perform his obligations under the contract is the result of an event of <b>Force Majeure</b>. The Contracting Authority shall similarly not be liable to payment of interest on delayed payments, for non-performance, idle equipment cost and labour costs in the case of shortages of diesel and or bitumen and/ or cement or for termination by the Contractor for default, if, and to the extent that, the Contracting Authority's delay or other failure to perform its obligations is the result of Force Majeure.</p>
	<b>SCC 61.5</b>	<b>Optional Termination, Payment and Release</b>
	<b>SCC 61.5.1</b>	If the execution of substantially all the Works in progress is prevented for a continuous period of 30 days by reason of Force Majeure of which notice has been given under <b>SCC</b> Clause 62.2, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with <b>SCC</b> Clause 63.
	<b>SCC</b>	Upon such termination, the Engineer shall determine the value of the

GCC Clause Reference	SCC Clause No.	Special Conditions
	<b>61.5.2</b>	<p>work done and issue a Payment Certificate which shall include:</p> <ul style="list-style-type: none"> <li>(a) the amounts payable for any work carried out for which a price is stated in the Contract;</li> <li>(b) the Cost of Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: these Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;</li> <li>(c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;</li> <li>(d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and</li> <li>(e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.</li> </ul>
<b>GCC 62</b>	<b>SCC 62</b>	<p><b>Release from Performance</b></p> <p>Delete the text of Clause GCC 63 in its entirety and replace with the following:</p>
		<p>Notwithstanding any other provision of this SCC Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:</p> <p>the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and</p> <p>the sum payable by the Employer to the Contractor shall be the same as would have been payable under SCC Clause 62.5 [Optional Termination, Payment and Release] if the Contract had been terminated under SCC Clause 62.5</p>

## **Section 9 : Contract Forms**

- 9.1 Agreement**
- 9.2 Performance Security**
- 9.3 Advance Payment Guarantee**

## Agreement

**Procurement Reference No:** [To be Inserted]

**THIS AGREEMENT** made the \_\_\_\_\_ day of \_\_\_\_\_ 2023, between The Roads Authority of Functional Building, Paul Kagame Road, Private Bag B346, Lilongwe 3 acting on behalf of the Government of Malawi (hereinafter called “the Employer”), of the one part, and

\_\_\_\_\_ (hereinafter called “the Contractor”), of the other part:

WHEREAS the Employer is desirous that the Contractor execute

\_\_\_\_\_ (hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein for the sum of

\_\_\_\_\_ (**MK** \_\_\_\_\_) (hereinafter called the Contract Price).

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 Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
  - (a) The Agreement
  - (b) Minutes of Contract Negotiations
  - (c) The Notice of Acceptance
  - (d) The Letter of Bid
  - (e) The Special Conditions of Contract
  - (f) The General Conditions of Contract
  - (g) The Particular Specifications
  - (h) The Standard Specifications for Routine Term Maintenance Works
  - (i) The Drawings and
  - (j) The priced Bill of Quantities
  - (k) The completed Qualification Information Forms and any other documents forming part of the Contract.
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.

5. The Contract Price or such other sum as may be payable shall be paid in Malawi Kwacha.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed in accordance with the law specified in the Special Conditions of Contract on the day, month and year indicated above.

**Signed by:**.....  
(for the Employer)

Name: Eng. Ammiel Champiti Position: Chief Executive Officer

**Witnessed by:**

**Name:** .....

**Address:** .....

**Signed by:** .....  
(for the Contractor)

Name: .....Position:.....

**Witnessed by:**

**Name:** .....

**Address:** .....

*Note for Bidders: The Performance Security should be on the letterhead of the issuing Financial Institution and should be signed by a person with the proper authority to sign documents that are binding on the Financial Institution.*

## Performance Security

### Performance Bank Guarantee (Unconditional)

Date: **[insert date]**

Procurement Reference No.: **[insert procurement reference number]**

To: **[name and address of Employer]**

WHEREAS **[name and address of Contractor]** (hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. **[number]** dated **[date]** to execute **[name of Contract and brief description of Works]** (hereinafter called “the Contract”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognised 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 **[amount of Guarantee] [amount in words]**, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of **[amount of Guarantee]** 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 or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.

This Guarantee shall be valid until a date twenty-eight (28) days from the date of issue of the Certificate of Completion.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

Signature and seal of the Guarantor:

Name of Financial Institution:

Address:

Date:

*Note for Bidders: The Advance Payment Security should be on the letterhead of the issuing Financial Institution and should be signed by a person with the proper authority to sign documents that are binding on the Financial Institution.*

## Advance Payment Security

### Bank Guarantee for Advance Payment

To: **[name and address of Employer]**  
**[name of Contract]**

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Clause 51 ("Advance Payment") of the above-mentioned Contract, **[name and address of Contractor]** (hereinafter called "the Contractor") shall deposit with **[name of Employer]** a Bank Guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of **[amount of Guarantee] [amount in words]**.

We, the **[Bank or Financial Institution]**, as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to **[name of Employer]** on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding **[amount of Guarantee] [amount in words]**.

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

This Guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until **[name of Employer]** receives full repayment of the same amount from the Contractor.

This Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Yours truly,  
Signature and seal:  
Name of Bank/Financial Institution:  
Address:  
Date: